

American Fruit Grower

FEBRUARY • 1961

25 CENTS

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**How to Cut
Spraying Costs**

**Why the Chick
Orchards Are "Tops"**

**Wind as a Force in
Training Peaches**

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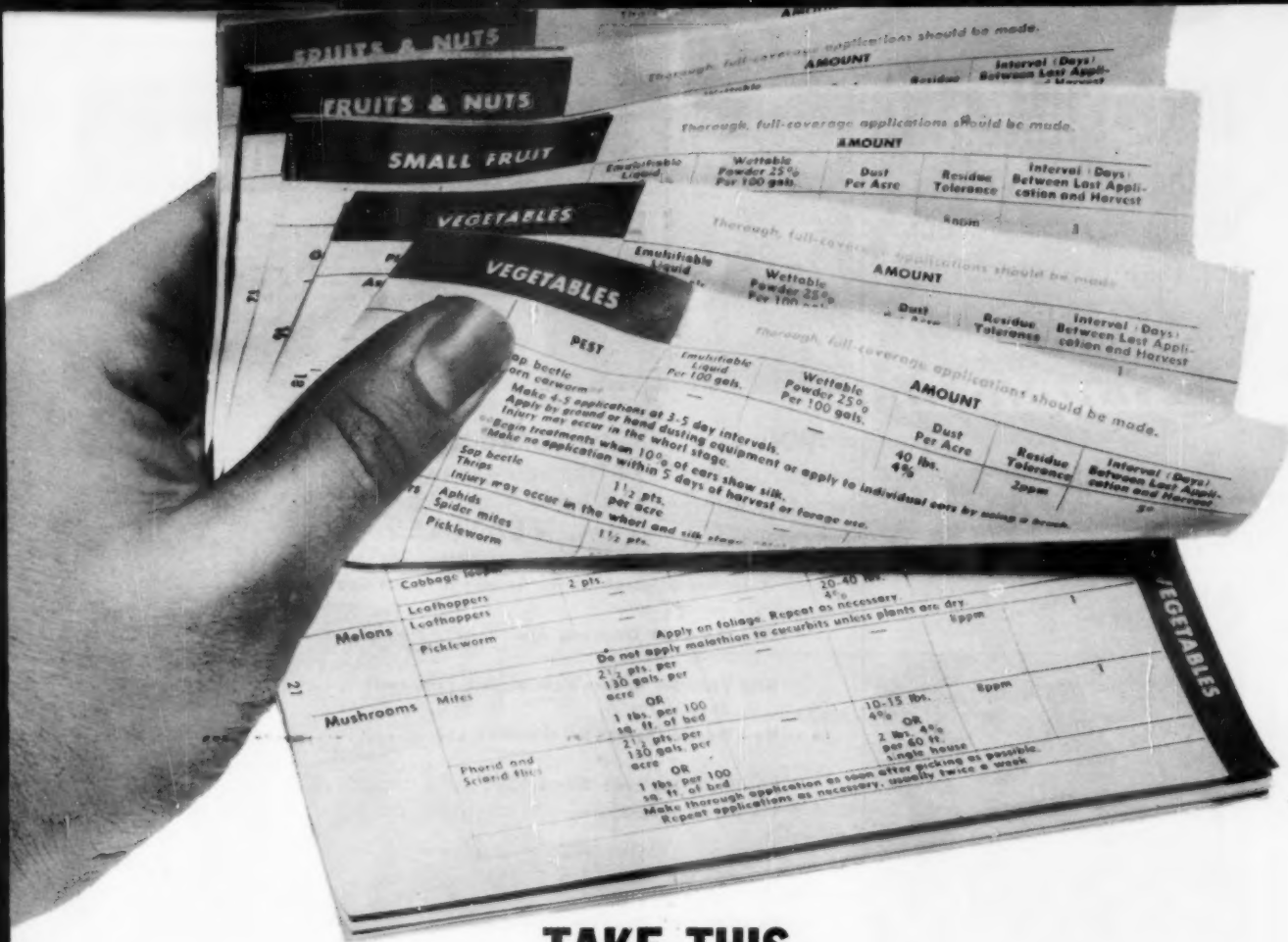
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American Fruit Grower

Reg. U.S. Pat. Off.

Cover photo shows a typical scene in an apple orchard where maximum spray coverage is being obtained for maximum pest control.

VOL. 81

FEBRUARY, 1961

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MIDWESTERN ADVERTISING MANAGER: Al Zilenziger, 333 N. Michigan Ave., Chicago 1, Ill. Phone—State 2-7128.

SEATTLE: McDonald-Thompson, 1008 Western Ave. Phone—Main 3-3766.

AMERICAN FRUIT GROWER is published monthly by American Fruit Grower Publishing Co., Willoughby, Ohio. E. G. K. Meister, Publisher and Chairman of the Board; Edward L. Meister, President; Richard T. Meister, General Manager; Gilbert Meister, Vice-President. Subscription price \$1.00 per year in U.S. and possessions; to Canada and other foreign countries \$2.00. Single current copies 25c; copies over one year old 75c.

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Protect your profits this season by using Glyodin—the economical top-quality fungicide. Glyodin controls scab and improves your whole spray program at low, low cost. See your Glyodin supplier now!

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LETTERS TO THE EDITOR

Another Slant On Migrant Problems

Dear Editor:

We raise about 25 acres of strawberries and are interested in current grumbling about the migratory farm labor problem. It is a problem. Without migratory labor, the public would be short on fruits and vegetables.

Our experience here with "professional fruit handlers" has been very bad. They are among the lowest in the labor market. Migrants know almost nothing about money management and are almost always broke. One of them said to me, "If money was made to hang onto, it would have handles on it."

They don't believe in education and will fight to keep their children out of school. Yet they seem to have a strange love for their progeny. They believe in working their kids hard. "I got kids so they will feed me when I get older," one of them told me. All kinds of theft are not uncommon, yet they will fight for each other and spend their last dime to get a buddy out of jail. A strange law of the herd rules them, and they aim to protect their way of life.

All of this pertains to white migrants from the South. Let's talk about Mexicans for awhile. Texas Mexicans are by far the best grade of people in migratory labor. Everybody in this area who employs them says so. They are polite and well-mannered. They keep themselves and their clothes clean. There is discipline and respect among their children.

Here at our place last season we experimented with music. Twice a week we cleared the strawberry dock early in the evening for a dance floor. When music hit the air, there were smiles on those tired faces that seemed to say, "It could be worse. Let's have fun trying to make it better!" Can some of those Mexicans ever dance!

We've provided a laundry room with washing machine and tubs for our migrants. Also a shower room. We believe it can be fun trying to make it better.

Martinsville, Ind. Maurice L. Donnellan

Ohio's Gargantuan Grape Vine

Dear Editor:

Recently I came across an entry in an interesting old diary kept in 1853 by Rev. L. C. Brooks of West Rushville, Ohio, which described the accidental chopping down that year of a monstrous grapevine, possibly the largest in the world.

The vine, which was estimated to be over 150 years old at the time it was destroyed, stood a little more than a mile west of Frankfort, in Ross County, Ohio. The vine was chopped down when two huge trees around which it had twined were felled. It was growing vigorously when destroyed, and no one knows for certain how large it was at that time.

The last recorded measurement was in 1942, 11 years earlier. The vine's circumference at that time was 16 feet, 10 feet above ground. At 20 feet above ground it divided into three huge branches, each roughly 8 feet around.

The vine's height, limited by the two trees which formed its trellis, was 75 feet, and the branches extended over an area of 150 feet. It had produced several bushels of "small hill" grapes annually, and the vine itself yielded 8 cords of wood when cut up.

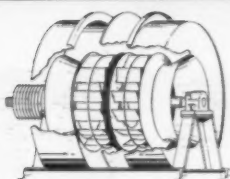
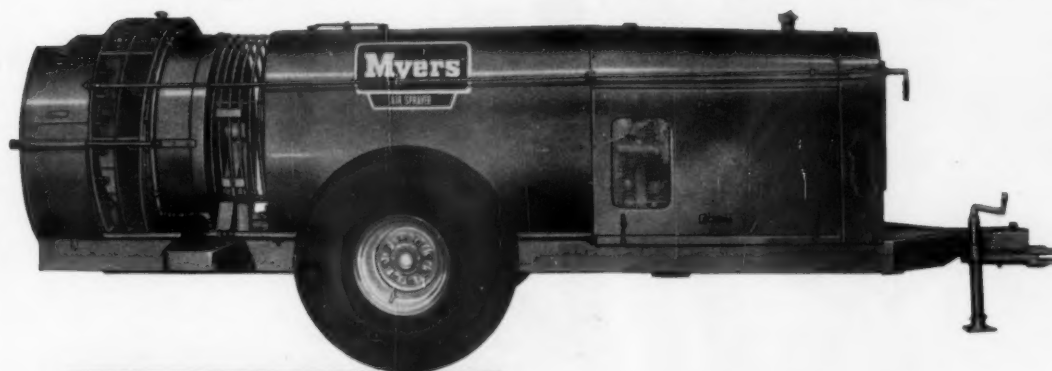
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Allan W. Eckert

AMERICAN FRUIT GROWER

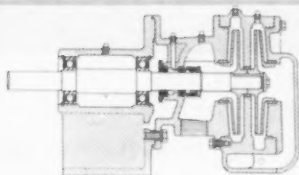
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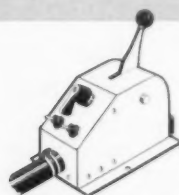
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6095-227ET5	Water Cooled Gasoline*	500**	Twin 26" Centrifugal Fans	60,000 at 80-90 MPH	Touch-Matic***
6095-225ET4	Water Cooled Gasoline	400	Twin 24" Centrifugal Fans	45,000 at 80-90 MPH	Touch-Matic***
6040-A36ET4	Air Cooled Gasoline	400	Axial Flow 36"	30,000 at 80-80 MPH	Manual

*6095-227ET5 Also available with Diesel Engine.

**400 Gallon Tank and High Pressure Piston Pump Optional.

***Discharge valves activated through electrically controlled hydraulic system.

Prove to yourself — ask your Myers sprayer dealer for a demonstration in your own grove or orchard, or write to:



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Mightiest Mite Killer!



Spraying with Genite wipes out early mites—saves you money, too! Control lasts far into summer. Results often continue into the following year! When you use Genite, you need fewer sprays later on.

Recommended use is between delayed dormant and full bloom. Genite comes in both 50% emulsifiable and 50% wettable powder forms. You need only 1 to 1½ pints of emulsifiable or 1 to 1½ pounds of wettable powder for each 100 gallons of water.

See your dealer now for Genite—and ask him, too, about PLYAC®, Allied Chemical's new liquid polyethylene spreader-sticker that makes all fruit sprays *stick* better and *stay* better.

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from Coast to Coast*



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40 Rector Street, New York 6, N. Y.



The high degree of insect control obtained by most growers in recent years attests to the effectiveness of recommended pesticides when used as directed.

"Constant Research" Is the Answer to INSECT CONTROL

By HOWARD BAKER

U. S. Department of Agriculture

THE activity of insects and mites is governed largely by seasonal weather conditions, particularly temperature and rainfall, and by the effectiveness of the spray programs used by growers. Control of many of the more important insects and mites attacking fruits is easier if the early part of the season is cool and wet.

A cool, wet spring over much of the United States in 1960 was unfavorable for codling moth, red-banded leaf roller, plum curculio, pear psylla, Oriental fruit moth, scale insects, and mites, and early season spray programs held populations of these pests to low levels. The same conditions, however, favored rosy apple aphids in the East and Midwest and extra effort was

Cool spring weather and effective spray programs checked insect activity last year. What's in store for growers this year? New uses for some of the older materials and label approval for a number of new ones

required to prevent serious damage to apples.

Later, as the season advanced and hot, dry weather prevailed, mites became troublesome in many sections of the country from Washington, Oregon, and California through Colorado, Missouri, and Indiana to Virginia and New Jersey. Late in the season the red-banded leaf roller appeared in numbers in Indiana and Ohio and in spots in Virginia in time to provide a somewhat heavier carryover than in 1959.

The fruit tree leaf roller was generally heavier than usual in New York, the Japanese beetle occurred in damaging numbers, especially on small fruits, for the first time in some years in parts of the older in-

festated area in the East, and the lesser peach tree borer continued to appear in above normal numbers in Indiana. Moderate infestations of the peach twig borer occurred in the West and there was some increase in populations of the grape berry moth and of gall-forming insects on grapes in portions of the Midwest and East.

The apple maggot caused concern in the Northeast and in northern Ohio and Indiana. Control of such insects as the peach tree borer, sucking bugs that cause deformed peaches, leaf feeding insects, and leaf miners was generally satisfactory.

There is no question as to the favorable effect of the cool, wet spring on the control of fruit in-

(Continued on page 47)

Why the CHICK ORCHARDS Are "TOPS"

Success of this Maine orchard, one of the largest in the state, is credited primarily to its new tree plantings and flexible marketing program

By JONAS HOWARD

EMPHASIS on young trees and a flexible, opportunistic approach to marketing are two principles credited for much of the success of the Chicks of Chick Orchards, Inc. Owners of one of Maine's largest apple orchards, the Chicks have some 350 acres of trees and sell their fruit under the Chic-A-Dee brand trademark.

Chick Orchards, Inc., was founded by brothers Ben and George around 1933, although it was not actually incorporated until 1950. A third brother, Arthur, joined the operation after World War II. Both Ben and George have sons who also are active in the firm.

From the start the Chicks have followed a firm practice of bringing along new, young trees to replace old, decreasingly fruitful stock. Each year from 500 to 1000 new trees are planted and a number of older trees are removed. Over the years the Chicks have taken over several neighboring orchards—and in each case there has been adjacent property permitting expansion through the planting of new stock.

Most of the apples produced by the Chicks are marketed through the New York brokerage firm of J. Norinsberg & Co. and A. Cavallaro Co., Inc., Boston, Mass. Customers for Chic-A-Dee apples are scattered throughout many eastern seaboard and midwestern states. The Food Fair Chain is one typically large customer. A goodly portion of the smaller sizes go out of the country to Europe and other parts of the world.

In addition, up to 10% of production is sold locally to a number



At foot of tree, left to right, are Norman, Roger, Ben Chick. Workers are hand trimming.

of Maine's larger markets and stores. Still another portion of the crop is sold via direct mail as Christmas gift packs.

According to Ben Chick, a good broker is vital to success in the apple business—by finding the best market for all the crop. He cited as an example the fact that a ready market for his smaller fruit has been found in certain parts of Europe where "school-boy size" apples are actually preferred.

As a further illustration of the importance of flexible and opportunistic marketing, Ben Chick pointed to one instance where heavy thinning of Cortlands during the growing season resulted in unusually large apples. The broker proceeded



Polyethylene bags of McIntosh apples are packed in cartons for shipment to supermarkets.

AMERICAN FRUIT GROWER



Norman Chick operates tractor which pulls sprayer through orchard. Most sprays are applied dilute but occasionally 2X is used. Pest control is started about the third week in April.

to sell the entire lot of these jumbo Cortlands to the Schrafft restaurant chain which featured them as giant baked apples topped with a marshmallow.

Chick Orchards, Inc., is centered in Monmouth, Maine, with all of its orchards located in Kennebec County. In 1959 the Chicks produced some 116,000 bushels of apples—about 10% of the state's entire output. By 1965 the output should climb to 150,000 bushels.

More than 50% of the Chicks' crop is McIntosh. In new plantings Macs account for about 70%. Says Ben Chick: "We feel that there is a future for Maine Macs. Though New York growers and others are decreasing their Mac production, we're increasing ours." He explains that the Maine climate makes for Macs which are of high color and firm texture.

In addition to Macs, the Chicks grow a considerable number of Golden Delicious. Third in importance is Red Delicious, fourth Cortland, and fifth Northern Spy. Others are early McIntosh and several of the newer early varieties.

Scab is Maine's number one disease problem for apples. Black rot and cedar rust are second and third greatest. European red mite is the primary insect problem, with aphids, apple maggot, bud moth, codling moth, and scale following in that order. In general, the insect problem in Maine is not so great as in many other states due to the generally cooler climate. Diseases, however, are as prevalent as anywhere else and must be watched closely.

The Chicks incorporate a pesticide



Apples in boxes on trailer at right will be leveled and loaded onto pallets for placement in storage. Trucks in rear contain apples from distant orchards that will go into storage.

program based almost 100% on Niagara Chemical materials. Pest control efforts commence around the third week of April. As foliage develops, scab control efforts begin. For early season scab control the Chicks use both dusts and sprays, with emphasis on dusts.

On Golden and Red Delicious Niacide® M is used throughout the spray program. For Macs and similar varieties Kolo 100 and Kolo Dust 100 are used up to pink bud stage and then a switch is generally made to Niacide M to include control of cedar rust and frog-eye as well as scab.

For the final two or three applications, a switch back to dusts is made. During the early scab season applications are made once or twice a week depending on rainfall. Later in the season the schedule is upped to 10 to 14 days between sprayings.

The Chicks use lead arsenate for controlling the broad class of insects

(Continued on page 53)



Employee in packing line at Chick Orchards fills Chic-A-Dee cell-pack carton with apples.

New Varieties Create NEW DISEASE PROBLEMS

Materials and time of application today must be more specific. The author suggests variations in the general disease control program to cope with special problems

By DWIGHT POWELL
University of Illinois, Urbana

THE most obvious trend in the fruit industry is the disappearance of the marginal grower. Today's grower remains in the business because he thoroughly understands fruit production and marketing and is able to cope efficiently and profitably with the many complex fruit growing problems.

Today's grower is well educated. A high percentage of Illinois fruit growers have college degrees. They read, study, and work for high quality fruit production. The gap between what the extension service recommends and what the grower does is rapidly closing.

The disease control program is affected accordingly. It is no longer a question of "were the sprays mixed properly and applied thoroughly?" It

is more a question of the efficacy of the fungicide in relation to the conditions associated with its use.

The spray program is more specific rather than of a general nature. Any one fruit grower may be using several different spray programs depending on variety, age of planting, and important disease problems.

In Illinois, new peach plantings are designed to lengthen the production period. The predominance of the Elberta peach is slowly diminishing in favor of earlier maturing varieties. Some of these varieties are more susceptible than Elberta to peach scab and bacterial spot.

Also, as the harvest period is extended the fruit rot problem becomes of increasing importance. Similarly, vigorous, highly succulent, virus-free strawberry plants have seemingly aggravated the foliar, fruit, and root disease problems.

Only the future will tell whether or not dwarf apple trees will have any effect on the disease problems. In considering just the economics of making such plantings, compared to standard trees, the fire blight disease appears to be more menacing than ever.

In the writer's experience, dwarf Jonathan are more susceptible to fire blight than standard Jonathan. Likewise, fire blight is attacking dwarf Golden Delicious trees, whereas it has never been a problem on standard trees of this variety.

Apple Diseases—It is important to mention first the most popular spray program used by Illinois growers and then bring out any variations that may be employed for special control problems. The most popular schedule combines organic mercury one-half strength with one-half strength of another organic in the prebloom period. After blossoms appear the organic mercury is dropped and either one organic fungicide is used full strength or two are combined at one-half strength.

This program may be continued throughout the summer with reduced dosages being used as the summer

progresses. There is apparently no special choice in the use of any one of the organic mercuries except that formulations of phenyl mercury acetate appear to have a slight advantage.

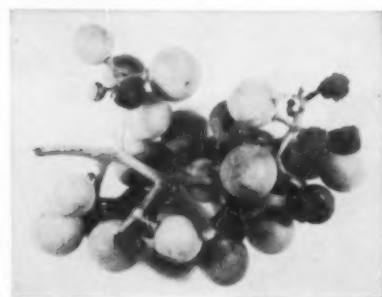
Of the other organic materials, the use of captan (Orthocide and Stauffer Captan) and zineb in combination far exceeds the others. In some schedules either Niacide M or thiram is replacing zineb.

Variations of this general type of program include the use of either sulfur or Karathane for powdery mildew on susceptible varieties; the use of glyodin as a spreader, sticker, and protectant fungicide; dodine (Cyprex) where scab is a more serious problem; full strength captan in late summer where bitter rot is prevalent; 1/2-1-100 Bordeaux mixture to reduce twig infections of the

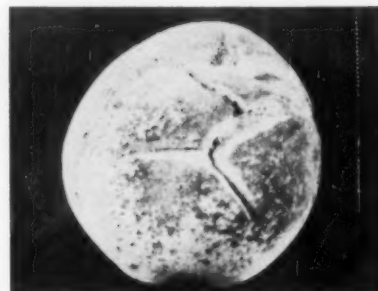
(Continued on page 55)



Limb canker of *Botryosphaeria ribis* on apple. The disease causes a soft rot of the fruit.



Black rot on grape results in black, shriveled fruit. Ferbam is effective for early season control.



Peach scab causes fruit cracking, paves way for brown rot. Sulfur is most effective spray.



Bacterial spot down-grades peach fruit but doesn't cause cracking. No satisfactory control.

TRITHION® gives you a clean start

Experienced apple growers know that the best, most economical time to start controlling mites, aphids and scales is while they are in the overwintering stage.

TRITHION with spray oil has proved highly effective for control of overwintering eggs of mites, green and rosy aphids. But timing is important. Begin sprays as soon as buds show green, and complete before leaves unfold from the buds.

If you do not use TRITHION-oil by delayed-dormant, TRITHION alone should be used in late delayed-dormant spray.

For your convenience, TRITHION is available in two formulations: TRITHION 25-W and TRITHION 4 Flowable (an aqueous emulsion containing 4 pounds per gallon). Start your spray program early . . . to give your apples a clean start. See your dealer.

Stauffer Chemical Company, 380 Madison Ave., N. Y. 17, N. Y.

©Stauffer's Reg. T. M. for an insecticide-scaricide.



How INDUSTRY Serves the Grower

Agricultural chemical producers today cater to the needs of growers through salesmen who are specialists in solving insect and disease problems

By P. D. PETERSON
Stauffer Chemical Company

IT IS characteristic of any progressive industry that progress takes place relatively steadily but not with spectacular speed. Consequently, those of us who are associated with the production and application of agricultural chemicals are often not as aware as we might be of the major changes which have taken place even in the past few years. But if we pause to consider what the characteristic role of our industry is today, and compare it with what it was even a decade ago, we realize that the changes which have been made are truly significant.

Not too long ago salesmen of agricultural chemicals were regarded as hearty fellows and high pressure "drummers." Not infrequently their focus was on the immediate, quick sale. Their regard for their commissions sometimes overwhelmed their concern for the grower's problem.

The service they rendered was casual; the grower knew much more about insects and fungi, pesticides and spray programs, residues and tolerances than did most agricultural chemical salesmen. In fact, all too often, the salesman's main store of information was confined to a repertoire of lusty stories, package sizes, his own prices, and those of his competitors.

However, as the agricultural chemicals industry has grown, and as it has matured, that has all become a part of the distant past. Today, nearly all agricultural chemicals companies insist that their representatives be well informed specialists.

They are no longer salesmen driving for the shortsighted sale but rather are advisors—partners of the grower. For well they know that only by helping the grower to cope with his infestation problems, by helping him to produce crops more profitably, can they build a long term, mutually advantageous business relationship.

It is part of my job to study the field reports turned in by our repre-



Field reports are being made here by research workers in peach orchard at Stauffer's experimental farm, Mountain View, Calif. This is one way in which the agricultural chemicals industry determines advantages and shortcomings of pesticides, thus relieving the grower of this responsibility.

sentatives. Day-by-day I read of unusual problems which have been solved by the application of specific insecticides. And, on field trips, I have been called upon to work with growers in the development of methods, ranging from the evaluation of windbreaks to the appraisal of the worth of forage and natural fertilizers.

In some cases satisfactory solutions can be originated on the basis of previous field experience with similar crops in other parts of the country. Frequently, however, a sound solution requires that we call upon the experience of the state and county experts, on agricultural specialists, and on the resources of our own research laboratories and experimental plots.

Many agricultural chemicals producers have adapted their organizations in keeping with the new needs of growers. They have installed extensive research laboratories. They have instituted, and now maintain, nationwide field test programs.

Some programs are, in fact, international, because a good deal of domestically valuable information can be developed from studies conducted abroad. For example, much of the work we conducted on the control of apple scab in Australia proved to be useful in United States and Canadian apple orchards. And our work with grapes in Canada and France proved to be applicable to problems which had developed in California and upper New York state.

Although Stauffer is only one agricultural chemicals company, I believe that our organizational structure illustrates how the industry has geared itself to serve growers more effectively.

The significant aspect of this organization, which is typical of today's industry, is the emphasis which is placed on technical knowledge and on technical service. All representatives, of course, have either a college or
(Continued on page 46)

SPIKE DORMANT OIL with **GUTHION** for better early insect control



The addition of Guthion to dormant oil in delayed-dormant sprays on apples has shown a significant increase in effectiveness over oil alone. The combination of Guthion and dormant oil is recommended for the control of rosy aphids, scale insects, red mites and will aid in the control of leafrollers. Amounts of material and time of application should be in accordance with local experiment station recommendations. This season, spike your oil with Guthion for

increased effectiveness against early apple insects.

And remember, a continuous all-season spray program of Guthion *alone* will give you better control of all major fruit insects than any complicated combination of conventional insecticides.

So plan an all-season Guthion program, from dormancy to harvest . . . and get better yields of higher quality fruit at less spray cost. Use Guthion. *It works!*

*Reg. T.M.

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ROYALTY .. in the

Growers selected these Blossom and Harvest Queens
to represent the Fruit Industry in 1960-1961



Florence Cloud of Winter Haven, Florida Citrus Queen.

Queen Citriana XXIV of Texas
Mary Lovey Wood (left), Mission.



Niagara Grape and Vintage
Queen Lucy Riley of Ontario.



Maine Apple Queen Terry
Jane Bowden of Brewer.



National Peach Queen Mary
Jane Hill of Lititz, Pa.



California Citrus Queen Judy
Ann Price, San Bernardino.



Sue Rogers of Ware,
Illinois Fruit Queen.



FRUIT WORLD



Washington State Apple
Festival Queen Peggy
Henny (above), Wenatchee.



West Tennessee Straw-
berry Festival Queen
Marianne Ragland, Milan.



Murrie Ann Tompkins, Traverse City,
Mich., National Cherry Queen.



Western New York Apple Queen
Marcia Lloyd of Williamson.



Texas State and San Saba County
Pecan Queen Kay Sullivan.



Queen Shenandoah XXXIII,
Yvonne Mendanca, Honolulu.

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THE *Brillion* CUT-ALL 60 Top Hand in Your Orchard

SHREDS PRUNINGS. The Brillion Cut-All 60 is the perfect answer to disposal of prunings. You simply drive over them. Prunings, regardless of size, are reduced to chips and shreds which quickly disappear into the ground.

CUTS GRASS. The Cut-All does an excellent job of orchard mowing. Height is easily adjustable.

Where you need to trim in under low hanging branches, specify the offset model.

ORCHARD CLEAN-UP. Fence rows . . . weed patches . . . brush . . . along lanes . . . anywhere you need to remove plant growth either for appearance, convenience or orchard sanitation, the Brillion Cut-All is your top hand.

Why you get more **VALUE** in the **BRILLION**:

• **5-FOOT SWATH.** Shreds everything. Sucks up loose material or cuts off vegetation at height you adjust to.

• **FRICITION-SLIP-CLUTCH.** Positioned right at the blades to cushion jolts in heavy cutting. No shock transfer to tractor bearings through PTO. (See cutaway view below.)

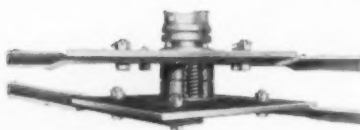
• **FOUR HEAVY BLADES.** Blades total 70 pounds, measure 4 inches wide by 1/2 inch thick; are reversible.

• **RUGGED SIDE HOUSING.** Shield is 3/16 inch steel with 1/2 inch thick reinforcing band. No heavier shield built.

• **OTHER IMPORTANT FEATURES.** Heaviest shredder gear box built . . . sure, dependable ratchet-type height adjustment . . . 3 universal joints instead of usual 2.



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Exclusive Brillion Friction-Slip-Clutch at the blades . . . where the shock is.

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Brillion, Wisconsin Dept. RS-15-2

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PEACHES

The Effects of Weather

"**W**IND is a force known only to God." This classic statement was recently made by William Teichman, of Eau Claire, Mich.

Every peach growing section has its prevailing winds and whenever winds increase in velocity so does the probability that they will be coming from the direction of the prevailing winds. This has a very profound effect on how young peach trees should be pruned.

Last season I summer trained some 2000 peach trees in their first growing year, allowing no limb at the crotch to develop in the quadrant of south to west.

In the Midwest we speak of the Bill Teichman tree. This is a tree tilted slightly away from the prevailing wind and the crotch developed from one dominant limb, curving and somewhat leaning toward the lee side!

In the future, I think I shall train all my young trees to this system to take full advantage of the wind, knowing that life in Nature produces greater strength when it has to fight for survival.

Indirectly connected with the weather, there is something new for the peach grower to consider—air pollution from foundries, aluminum plants, and other sources. These fluorides discharged into the air can cause serious economic problems to the peach grower.

Soft suture and splitting of the peach have resulted in certain varieties in commercial growing sections south of Wenatchee, Wash., the Essex County and Fort Erie area of Ontario, Canada, and other sections. The symptoms show up about two weeks before the peach attains maturity and may reach such serious conditions as to make the peaches unsaleable.

This injury is reported in the 1959 proceedings of American Society of Horticultural Science by Dr. Benson of Washington State University. Research has also been done on this new problem by Dr. G. M. Weaver of the Harrow Experiment Station and by USDA at Beltsville, Md. Before removing the trees, as many growers have done, this problem should be thoroughly investigated.

The effect of weather on the number of applications of spray material and the concentration of materials to use is relatively well understood by fruit growers. The effect of weather in other ways on his business is often overlooked.

Drought not only affects the size of



steps up fruit color, set, quality!



"SELL-OUT" QUALITY STARTS WITH SUL-PO-MAG!

Sul-Po-Mag supplies water-soluble magnesium and potash in the safe, low-chloride sulphate form!

If you apply Sul-Po-Mag, you never need worry about poor fruit quality resulting from magnesium deficiency (common to better than half of all apple



SMALL FRUIT — A steady diet of Sul-Po-Mag is vital for raspberries, strawberries — all bush and vine fruit. Low chloride level maintains top quality... ends the risk of chloride injury.

PEACHES — This fruit is particularly sensitive to fertilizer chlorine content. Sul-Po-Mag sulphate form of potash avoids this danger and promotes tree health, higher crop yields.

orchards). Sul-Po-Mag is double sulphate of potash-magnesia — with less than 2.5% chlorine.

This fruit-tailored ingredient (potash in sulphate form) protects your orchards from tree and crop chlorine injury. Sul-Po-Mag brings your entire crop to hardy maturity. You'll see richer color, healthier appearance — fewer blemishes. Season after season you'll grow for top money in preferred-quality markets with the magnesium-rich nutrition of Sul-Po-Mag feeding your orchards.

Ask your dealer for complete fertilizers containing Sul-Po-Mag (or apply Sul-Po-Mag direct) and you'll grow for "sell-out" quality!



This seal is your assurance of extra-value fertilizer

INTERNATIONAL MINERALS & CHEMICAL CORPORATION

ADMINISTRATIVE CENTER: SKOKIE, ILLINOIS



SPM-14-01

FEBRUARY, 1961

HERE'S THE ANSWER TO RISING PRODUCTION COSTS!

STARKRIMSON DELICIOUS

APPLE TREES

**Sensational New Semi-Dwarf
Fruit-Spur Type Tree
Gives Bigger, Better Colored,
More Profitable Crops—QUICKER
—At Lower Cost of Production**

Leading horticulturists, growers and shippers acclaim the Starkrimson Delicious as the quickest bearing, reddest, most regular money-maker of all red Delicious Apples—a perfect team-mate for top quality, young-bearing Stark Golden Delicious.

Starkrimson is the answer to a semi-dwarf tree of the Delicious variety. Very little pruning is needed once these trees get into full production.

BEST COLOR OF ALL RED DELICIOUS

Careful comparative evaluation of the STARKRIMSON (Bisbee Strain) of Delicious with other spur type trees has now conclusively proven that this strain colors earliest and develops the most beautiful color of all spur type strains of Delicious. Studies made by qualified horticultural authorities and growers in the western and eastern fruit growing areas where the fruit spur strains have been grown under identical soil and climatic conditions have now proven color superiority of Starkrimson.

Starkrimson Delicious (Bisbee Strain) is the strain that will give you good, extra fancy color every year. This higher color factor will mean extra profit to you.

Leading Horticulturists and growers reporting on advantages of Fruit-Spur Trees state that Spur Trees have the following characteristics: (1) Fruit-Spur Type Trees bear younger. (2) They are about $\frac{3}{4}$ the size of normal trees. (3) More resistant to winter freezes and spring frosts. (4) Fruit set is heavier. (5) All costs are substantially reduced and experienced fruit growers are now convinced that Starkrimson Delicious apples can be produced at least 25¢ per box cheaper on spur type trees. Much less pruning is necessary.

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Send coupon below for our latest catalog and special commercial prices on Stark World's Champion Apple, Peach, Cherry, Pear, Plum Trees, etc. See new varieties, genuine Stark "Record-Bearing" strain Standard and Dwarf Trees. See how you can insure your future profits—today!

Turn Spare Hours Into Easy Cash Writing Stark Orders

Introduce Stark Bro's super-quality nursery stock in your locality—spare or full time. Friendly, easy work pays amazing extra income to folks all over America. Check coupon at right and we will send you our big FREE money-making Outfit and full information. No obligation.



STARKRIMSON DELICIOUS
(Bisbee)
U. S. Plant Patent
No. 1565
Trees sold ONLY
by Stark Bro's

TWICE AS MANY APPLES

Here's why it's predicted that the Starkrimson Delicious will produce twice as many apples and will double profits the first ten years.

- Bear bigger crops quicker.
- Are tops for delicious flavor.
- Bring premium prices on markets.
- Earliest coloring spur type Delicious.
- All apples can be picked at same time—less picking cost.
- Twice as many apples the first 10 years—bigger, quicker profits.
- Frost-resistant and hardy.

**SPECIAL LOW PRICES
on 50 or more
STANDARD or DWARF TREES**

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- ☐ Send FREE, new Stark Fruit-Landscape Catalog filled with gorgeous natural-color photos of your 418 varieties of Fruit Trees, DWARF Fruit Trees, Flowering Shrubs, Flowering Trees, Shade Trees, Vines, Roses, Grapes, Berries... and amazing new STARKRIMSON DELICIOUS APPLE.

- ☐ Send me SPECIAL LOW COMMERCIAL PRICES. I plan to plant:

☐ Standard ☐ Dwarf Trees

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1st initial 2nd initial last name

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P.O. _____ Zone _____ State _____

- ☐ CHECK HERE for Money-Making Sales Plans and FREE Demonstration Kit. Introduce Stark Super-Quality Varieties to friends, neighbors.

fruit but, continued into the fall, can set the stage for serious root freezing. Where peaches are set in light soils and on exposed locations without adequate ground cover, snow often blows away, leaving the soil exposed to deep freezing. The dry fall of 1957 in Michigan and Ontario, Canada, with low winter temperatures resulted in the death of thousands of trees in the winter of 1957-58.

Extensive dry summer and fall existed again in 1960. Many peach growers applied up to 3 inches of water in late October hoping to offset the effects by having a layer of moisture in the soil when the freezes came.

The opposite condition—an unusually wet fall—presents the problem of getting the trees sufficiently hardy to stand low winter temperatures. In



Frank Street demonstrates to W. W. (Tubby) Magill the open quadrant theory of summer training peach trees in their first growing year.

our locality, cultivation must be discontinued in anticipated wet seasons by June 20 and the growth of a summer cover crop encouraged. This is of particular importance with young peach trees in rich soil or low locations. (These decisions must, of necessity, be made very early in the growing season.)

Canker is becoming more and more a problem with many peach growers. It is more pronounced on young trees that are not healed off in time for the sap to recede before severe freezes occur. Proper crotch formation is of prime importance.

Trouble can be expected on young trees in orchards where the soil is very rich, where vegetables are grown as an intercrop, where irrigation or excessive cultivation is continued too late, and where too much nitrogen or manure have been applied.

On a recent trip to some peach sections in Ontario, Canada, I was
(Continued on page 22)

ETHION

Gets 'em before they can get started in your orchard



KILLS MITES



KILLS APHIDS



KILLS SCALE

A HIGHLY EFFECTIVE INSECTICIDE-MITICIDE FOR LATE DORMANT APPLICATION IN OIL

Ethion, discovered in the research laboratories of Niagara Chemical Division, Food Machinery and Chemical Corporation, is now being marketed through selected formulators throughout the country. It is an organic phosphate insecticide-miticide. Over four years of field testing have proved ethion to be an economical and effective aid to fruit growers.

ECONOMICAL TO USE

Superior pest control with ethion-oil sprays can be obtained with lesser amounts of oil, thus providing a wider range of safety from oil injury, while increasing insecticidal efficiency.

KILLS OVERWINTERING STAGES

The primary usage for ethion is for late dor-

mant applications in oil on deciduous fruit trees to control overwintering stages of mites, aphids and scale. These pests can be controlled by this application more effectively than with later sprays, thereby giving protection before insect damage occurs. By spraying with ethion in oil during the late dormant period, this job can be done more economically and most effectively at a time of the year when other orchard duties are less demanding.

WHERE TO BUY

Many formulators and their dealers now have ethion-oil in stock. See your supplier now and prepare to take advantage of this most effective spray application.

ETHION is a product of the Technical Chemicals Department, Niagara Chemical Division, Food Machinery and Chemical Corporation, Middleport, N.Y.

5942

SHAKE HANDS with a new ROCKET



Head curved
in natural
pruning
position

No. A35
Rocket
Pruner

\$325

This all new, completely different pruner feels like it was made for your hand alone... really comfortable! Will it cut as well as it feels? Ask your dealer for a length of wood dowel to test it. The ROCKET takes a crisp, clean bite. Notice how the curved head eliminates tiring hand positions, how comfortable the cushion grips are. Feel how excess weight is "engineered out" without sacrificing professional size. Think of the difference these things make after a day of pruning. They are the real savings in any tool. True Temper, Cleveland 15, Ohio.

TRUE TEMPER
THE RIGHT TOOL FOR THE RIGHT JOB.

EFFECTS OF WEATHER

(Continued from page 20)

shown a severe canker condition in almost every young orchard I visited. Each grower had a different theory as to the cause but the last orchard I saw—an eight-year-old block of fine trees—was entirely free of canker. Why? It had only casual care the first four years after it was planted and it grew slower than normal and had no irrigation. The past four years this orchard received expert attention and produced fine peaches.

Bob Anderson, pioneering peach grower of Covert, Mich., thinks our number one enemy is peach canker. I agree with him that experiments designed to determine the part weather plays in this damage would be most timely.

Perhaps the advent of weather satellites will mark a new day for the peach grower. Unfortunately, it may take years for us to interpret this new information to fit the needs of the grower.

A recent publication of Smithsonian Institute on long-range forecast of precipitation is too technical for our lay minds. The work is based on the assumption that precipitation is correlated with the march of weather at successive intervals of 273 months. This bears out a statement I quoted in an article published in *AMERICAN FRUIT GROWER* in April, 1957. There is a pattern which weather follows: "What has been will be."—Frank T. Street, Cardinal Farms, Henderson, Ky.

APPLES

How to Cut Spraying Costs

SPEAKING before the Indiana Horticultural Society last winter, A. B. Burrell, well-known fruit grower of Peru, N. Y., discussed what he considers is a prime requisite of economical pest control. The principle is that the earlier in the season a pest can be controlled, the more economical the control is likely to be.

To illustrate his point, Burrell referred to some scab control results of growers in the Hudson Valley taken from a statewide survey conducted in 1950. Growers who got good to excellent scab control spent, on the average, \$32 per acre for fungicides. Those who got fair control spent \$41, while those who got poor control spent \$49.

Similarly, for the whole state, those who averaged less than 9.5 applications had 4% fruit scab while

those who made more than 15 applications averaged 20% fruit scab. The explanation is that those who permitted scab to become established on the early leaves spent a lot of money trying to check it, but were not successful.

It is for this reason and because it is easier to hit the target surface before foliage has become fully developed that Burrell favors preventive treatments and controlling each pest as early in the season as practical.

Russet-Free Goldens

THE production of russet-free Golden Delicious apples has become a major goal of many fruit growers in the Cumberland-Shenandoah Valley area. It is one of the most popular varieties in the area.

While much of the crop now goes to the canning factories for use as apple slices and sauce, smooth Golden Delicious are easy to sell and often bring 50 cents to \$1 per bushel more than russeted fruit of the same variety.

One of the questions most frequently asked us by growers is "Can you tell me how to grow smooth Goldens?"

Our answer is "No" to the question phrased in that manner.

Genetic mutations occur within the variety where the mutant fruit is more or less completely russeted. More important, there are some years in which one-third or more of the fruits may be russeted in the absence of any chemical treatment.

In fact, we have data which show clearly that fruit sprayed with some materials may be smoother than unsprayed fruit of the same variety. Large differences between sprays do occur, however, as well as differences between locations.

We would list the following points as important in our area:

- The smoothest Golden Delicious are usually grown at our highest orchard elevations (about 1500 feet). This is so striking that often you can note the difference in fruit finish as you walk down the hill within an orchard. Small differences in elevation may be important.

- Choose a spray program adapted to the orchard and follow it through unless major problems arise. Some growers get into trouble by choosing the cheapest recommended mixture for each spray without proper consideration of the effects of the other sprays in the program.

- Spray mixtures should be as simple as possible with the minimum number of chemicals applied at the

Now You Can Get

SEVIN[®]

INSECTICIDE

at a New Low Price

When these insects attack
**SOCK 'EM with
SEVIN[®]**

- Codling moth
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- Apple maggot
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- Japanese beetle
- Grape berry moth
- Oriental fruit moth
- Plum curculio
- Cherry fruit fly
- Strawberry leaf roller
- Eastern tent caterpillar
- Apple mealybug
- Eye-spotted bud moth
- White apple leafhopper
- Rosy apple aphid
- Fruit tree leaf roller
- European apple sawfly
- Tentiform leaf miner
- San Jose scale
- Lecanium scale
- Forbes scale
- Oystershell scale
- Grape leafhopper
- Lesser peach tree borer
- Cat-facing insects
- Black cherry aphid
- Meadow spittlebug

There is a big and growing demand for SEVIN—the great, new insecticide that did such an outstanding job in controlling codling moth and other major pests for thousands of fruit growers last year. Volume demand means volume production and a lower price.

Ask your insecticide supplier about the new low price of SEVIN... and look at all the major advantages you get from using this new and different insecticide on apples, pears, peaches, grapes, prunes, plums, cherries or strawberries.

SEVIN controls resistant insects that have developed immunity to other insecticides. You need fewer applications of SEVIN because it is highly effective and long-lasting even in the hottest weather.

SEVIN is easy to handle with safety. No protective clothing required—just use normal precautions. It can be used up to the day before harvest on most fruits—the day of harvest on grapes—when applied according to label instructions.

See your supplier and place your order early. Get the high efficiency and superior benefits of SEVIN at the new low price—in spray or dust formulations.

**UNION CARBIDE
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Light weight, heavy duty pruners designed and manufactured to the highest professional standards. Clean, fast healing cuts, complete reliability and long trouble-free service life.

SNAP-CUT
No. 1149
\$7.50



New, light weight, heavy duty anvil type lopping shears. Alloy metal handles. 100% guaranteed. Cuts limbs up to 1 1/4" diameter.

SNAP-CUT
No. 119
\$3.25



The original anvil type pruner. A terrific tool. Cuts up to 3/4" branches. All parts replaceable.

"ALL PURPOSE" TREE PRUNER (NO. 3)

An easy pull cuts 1" branches, spring opens blade for next cut. Lever action. Tempered cutlery steel blade. Heat treated steel head riveted to pole.

6 foot\$5.25
8 foot\$5.95
10 foot\$6.50
12 foot\$6.95



**TIFFANY
LOPPING SHEARS**
30"—\$8.75
25"—\$8.00

Double cut "drawn in" cutting action. All forged, improved bolt and nut joint. Through tang handles.

NEW, FINEST EVER PRUNING SAWS

No. 1922
22" blade—\$6.25

Fastest, easiest cutting saws for orchard use. Swedish steel blades. Complete line of 6 models covering all requirements up to chain saw work.

Quality Tools
SEYMOUR SMITH
Since 1850

See your dealer—
or write
for free,
descriptive
literature.

SEYMOUR, SMITH & SON, INC.
Oakville, Connecticut, U. S. A.

lowest concentration needed for pest control.

- The sprays should be applied during periods when they will dry rapidly. The practice of spraying 20 to 24 hours a day until an application is completed may not be wise where fruit russetting is important.

- Heavy, drenching sprays at high pressure should be avoided. Best finish has been obtained with a blower using just enough spray and air-blast to cover the tree without drenching it.

One grower with a large acreage of Golden Delicious says that he can tell the difference in fruit finish with different air-blast sprayers. We are inclined to accept his idea. We prefer fine spray drops carried by a relatively large air volume at moderate speed.

- Captan (Orthocide and Stauffer Captan) is the preferred fungicide for Golden Delicious. The standard concentration is 2 pounds of 50% wettable powder per 100 gallons of spray. However, we often reduce this to 1 1/2 pounds where other fungicides must be added for rust and mildew control. The concentration may be reduced to 1 pound after the second cover spray if no serious disease problem exists or is expected.

Modifications of the straight captan program might include: 1) the addition of about one-half pound of a light-colored dithiocarbamate fungicide like zineb or thiram in at least the pink, petal-fall, and first cover sprays for control of cedar, quince, and apple rusts; 2) the addition of Karathane at 4 ounces in all sprays from delayed-dormant through the fourth or fifth cover in those orchards where powdery mildew is causing a significant amount of injury; and 3) the addition of zineb at three-fourths to 1 pound in the last two cover sprays in areas where sooty blotch and fly speck occur.

Captan has a relatively short residual life and, in those areas where late-season diseases are serious, sprays must be continued after August 15 or zineb must be added to prolong the period of protection.

- With the insecticides, we prefer a program which includes oil plus malathion at green-tip followed by Guthion plus lead arsenate in the petal-fall and third through fifth cover sprays. We use Guthion plus dieldrin in the first cover spray and Guthion plus Rhothane in the second, sixth, and seventh covers.

Some of the more useful modifications of this program include: 1) the addition of Guthion in pre-pink where aphids are still present; 2) use of a special application of dieldrin

on a warm, sunny day between pre-pink and pink in a few orchards where the regular program has not provided adequate control of plant bugs; and 3) the addition of a miticide (usually Kelthane) or miticide mixture (Kelthane plus Tedian) in one or two July or August sprays in about one-third of the orchards which need help in mite control.

Certain major points should be noted regarding our use of Guthion. First, it is used in a series of sprays beginning before a crisis occurs. Second, we use it at a low concentration (one-half pound) in combination with another insecticide. Third, we try to promote light but thorough applications. Used in this way, it has been one of the safest materials on fruit finish.

Fourth and finally, Guthion has promoted early ripening of Golden Delicious apples. This factor must be considered in choosing a harvest date.—*F. H. Lewis and Dean Asquith, Fruit Research Laboratory, Arendtsville, Pa.*

PEARS

Problems Multiply

CALIFORNIA pear growers are facing still another problem in their fight to overcome the pear decline disaster. One of the most promising replacement rootstocks, Old Home, proven resistant to pear decline, may carry pear measles.

This malady is also suspected of being a virus disease. It cuts pear production in mature trees from one-third to one-half, according to researchers of California Pear Decline Research Committee. An additional problem is that pear measles produces no visible symptoms for several years after planting, so a grower could unknowingly plant infected trees.

The researchers fear that at least 50% of the young pear trees in California now on Old Home roots or with Old Home as interstock may carry measles.

However, there is hope for measles-free Old Home roots in the future. University of California pomologists are propagating cuttings—so far on a small scale—that apparently are free of the disease, and near Medford, Ore., a large number of Bartlett trees on measles-free Old Home stock may serve as a future source of supply.

But since neither of these sources is available to growers who plan to replant this winter, it is suggested that growers plant young trees on domestic French rootstock varieties.

OFFICIAL TESTS SHOW DYNACLONIC DIESEL ECONOMY ALL-TIME BEST IN 30-45_{hp} CLASS

Right from the start, our own field testing showed us we had a real "fuel miser" in the new Case Dynaclone diesels. Enthusiastic reports from owners confirmed it. And now the clincher! In official tractor tests just completed a Case Dynaclone 531 tractor set a new world record—only .434 lb. of fuel per h.p. hour—the lowest fuel consumption at maximum b.h.p. of any diesel* in the 30 to 45 b.h.p. class. Other tractors in this power range used up to 25% more fuel!

And don't think the test tractor was sparing the horses! This same Dynaclone diesel also established a new U.S. record in this class for maximum drawbar pull in direct drive—6,124 pounds . . . nearly a thousand pounds more than its closest competitor.

These two official tests back up the conviction of Case engineers that long-stroke, high-torque tractor engines can out-pull and out-perform short stroke automotive engines for heavy-duty farm work.



The tests confirm the efficiency of this new Case engine with its 17.5 to 1 compression ratio . . . and "controlled Dynaclone turbulence" (see diagram)

that swirls extra large volumes of air into the cylinders to assure thorough mixing with fuel for fast, complete combustion.

3 Dynaclone Diesels . . . all with POWER that L-A-S-T-S!

There are 3 Dynaclone sizes: the 35 h.p.** 430, 43 h.p.† 530, and

50 h.p.** 630. All three are built to maintain their record-breaking power and economy under long, rough field service. You can see proof of extra stamina in the heavily-ribbed block . . . the massive induction-hardened crankshaft with five main bearings that give full support at both sides of each piston.

Get a Proof Demonstration

Get full details of Case record-breaking power, economy, and durability from your dealer. See the Dynaclone tractor model and tool you're interested in demonstrated in your fields.

*As of November 15, 1960

**Sea level (calculated) maximum b.h.p. (based on 60° F. and 29.92 in. Hg.). Manufacturer's rating. Not yet tested in Nebraska.

†Sea level maximum b.h.p. (based on 60° F. and 29.92 in. Hg.). Calculated from Nebraska Tests.



Case 630 Dynaclone Diesel, big "brother" of the record-breaking 531, with heavy-duty, wheel-type offset disk harrow. Here's tough 4-plow power to handle heavy tillage tools, sprayers, loaders or wagons . . . economical power for light draft or utility work. Gasoline engine also available.

Choice of 4 models . . . 4 transmissions: 12-speed Tripl-Range, 4-speed standard, 8-speed Dual-Range shuttle, or Case-o-matic Drive®. Case-o-matic gives you double pull-power automatically as needed, without shifting or stalling . . . lets you start heavy wagons in high gear, then flick to direct drive on-the-go for fast highway travel . . . gives you PTO priority on engine power.

Here's **POWER** that **L-A-S-T-S!**

GET A DEMONSTRATION TODAY!

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CROP-WAY
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lets you buy now,
make later payments
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CASE

J. I. CASE CO. • RACINE, WIS.

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BEAN-NIAGARA DUSTER

Complete coverage, faster rate-of-work, big capacity — get all these advantages with the Bean-Niagara 110 Series Duster. Powerful 2000 r.p.m. blower produces 3700 c.f.m. air volume for positive, all-over coverage. Blower head rotates 180° for right or left discharge. Mechanically agitated, 200 lb. hopper with positive feed control assures uniform, non-clogging feed. 3-point mounted, P.T.O. — driven, convenient tractor-seat controls.

For low cost air spraying, see
John BEAN Speedaire attachments

ASK YOUR DEALER, WRITE FOR LITERATURE

**John
BEAN**

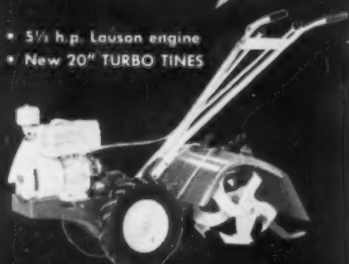


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ROCKET

- 5½ h.p. Lauson engine
- New 20" TURBO TINES



Ariens 5½ h.p. ROCKET... with fingertip controls... 2 forward speeds and reverse... exclusive tiller drive... all-steel TURBO TINES for 20" tillage... offers more quality, dependability, performance and value than any other tiller in its price range. See it... try it... and you'll agree!

Ariens Co., 139 Calumet St., Brillion, Wisconsin
Rush details about the ROCKET advertised
in American Fruit Grower.

NAME _____
ADDRESS _____
CITY _____ ZONE _____
COUNTY _____ STATE _____

BERRIES

Strawberry Spraying Success

FROM less than 10 million pounds in 1959 to about 13.9 million pounds in 1960! That's the record New Jersey chalked up for strawberry production for fresh market, especially for the roadside stand trade.

The 10-year average for the state, through the 1960 season, was 8.5 million pounds from about 3300 acres. Strawberry culture in New Jersey is today a \$3.5 million industry.

The demand for high-quality berries, frequently grown on restricted land due to urbanization pressures, has intensified production problems. Only high yields and fancy packs can compete with other states.

One grower producing quality products for retail at his own stand is Paul Prince. Prince owns about 100 acres of land in Springfield, N. J., an urban area with flourishing housing projects, shopping centers, and small stores. The location of the Prince farm and adjacent roadside stand is a subject of interest since high land values demand a well-planned production of salables and the judicious use of pesticides to make the enterprise profitable.

Prince raises a complete line of quality vegetables and specialties totaling 25 or more varieties. About 1 acre is devoted to strawberries, which yields from 10,000 to 12,000 quarts.

As a basic step in reducing disease problems, only virus-free stock is selected. Virus-free plants are available through New Jersey Small Fruits Council. This organization,

based at Rutgers University, New Brunswick, promotes the use of clean stock in New Jersey.

Once the plants are in the ground, insect and disease control becomes a constant problem. The use of newer insecticides and the maintenance of a strict schedule of application have reduced pest problems to easily controlled proportions.

An excellent example of this was the elimination of the spittlebug problem on the Prince farm. Prior to the advent of the organic insecticides, spittlebug was a serious chronic problem. However, a single application of 30 pounds of 1% lindane dust each year, timed to coincide with peak nymphal populations late in April, eliminated this insect after three seasons.

To control other insect pests, including strawberry aphid, strawberry leaf roller, and picking season infestations of sap beetles, 30 to 35 pounds of 1% parathion dust is applied at early bloom and at two-week intervals up to 15 days before the picking season begins.

After harvest, fields are checked periodically for outbreaks of aphids and leaf rollers and further applications of parathion dust are made as needed. In addition, a fall treatment of parathion is made during the middle of September for late infestations of virus-carrying aphids.

This schedule has proven to be so effective that there has not been a serious outbreak of insects for the past several years. The excellent degree of insect control may be attributed to three facts: 1) recognition of the insect problems when they occur; 2) an effective schedule and proper timing of applications; and 3) thorough application of proper materials.

However, in spite of this, prob-



Paul Prince, left, and his father stand in front of roadside stand located in urban area. From 10,000 to 12,000 quarts of home-grown strawberries are sold each year through this outlet.

lems do occur. Mite infestations frequently become heavy enough to cause serious trouble. Two-spotted mites and red spider mites are the primary problems, but cyclamen mites have occasionally become heavy. A mixture of 3% Kelthane and 4% malathion dust is used at 35 pounds per acre to control both the two-spotted and red spider mites. This combination treatment, applied as needed when populations become high, has proven to be very effective in controlling these species.

About three years ago Prince was having difficulty controlling cyclamen mites. The problem was solved by making a heavy application of Kelthane in late August followed by a prebloom spray the following spring of one-half pound actual Thiodan. An additional application of one-half pound actual Thiodan after harvest reduced the cyclamen mite problem so that none was found in 1960.

A program of soil fumigation is not included by Prince in his routine pest control schedule since soil pests such as strawberry weevil and white grub have been no problem for several years.

At one time, however, considerable numbers of plants were lost to Japanese beetle larvae. To alleviate this grub problem, heavy applications of 20 parts of lead arsenate and 80 parts of hydrated lime were dusted on the fields prior to planting.

This treatment reduced populations to a point where the pest was no longer of economic importance.

No soil fumigation has been done for nematode control. Plant samples, however, are taken periodically and analyzed for nematode populations. Furthermore, small areas are occasionally treated with nematocides in order to compare growth and yield against similar untreated areas.

Prince considers diseases to be less of a problem than insects. In addition to starting with disease-free plants, an application of one-half pint of 10% phenyl mercury in 100 gallons of water is used at first signs of growth to protect against berry-brown cap and the various leaf spots. An additional application of a 5% captan dust (Orthocide and Stauffer Captan) is made during blossom and again 10 days later. If the season is particularly wet, a third captan dust is applied prior to harvest to protect the fruit during and after picking.

Paul Prince's formula for successful production of strawberries: You have to know strawberry culture, and you have to act intelligently.—*Richard I. Guest, Extension Service, College of Agriculture, New Brunswick, N. J.*

FEBRUARY, 1961

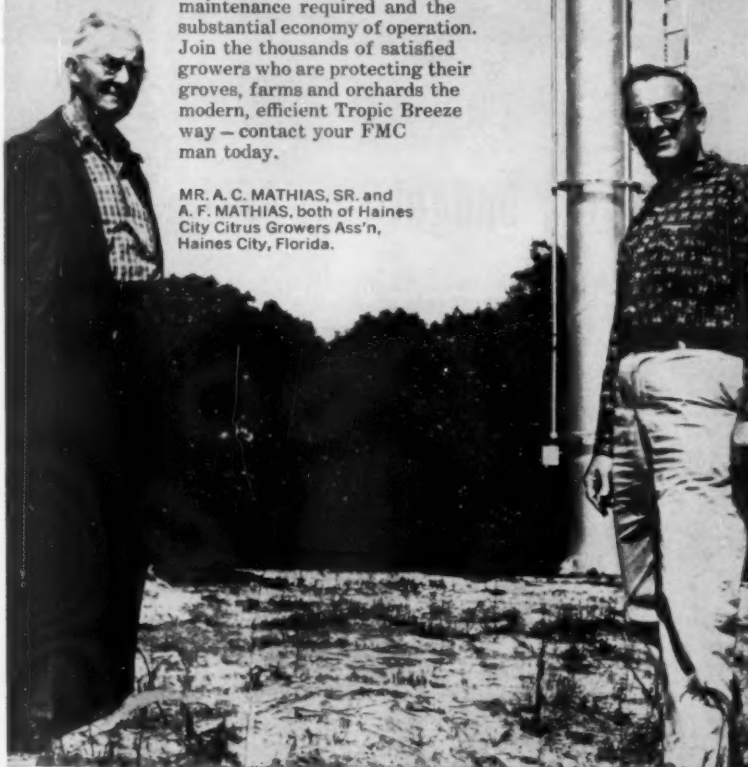
FMC tropic breeze wind machines provide effective protection against possible frost damage

The proof of protection by Tropic Breeze wind machines was demonstrated to the Haines City Citrus Growers Association last winter when their FMC wind machines operated for 8 freezing nights. During this period, no damage was sustained by trees within the Tropic Breeze machines' range; even the small new trees near ground level were protected.

This kind of coverage is only one of the points that are fast making FMC Tropic Breeze wind machines the favorite of growers throughout the country. Other important features are the inherent quality

of FMC construction, the low maintenance required and the substantial economy of operation. Join the thousands of satisfied growers who are protecting their groves, farms and orchards the modern, efficient Tropic Breeze way — contact your FMC man today.

MR. A. C. MATHIAS, SR. and A. F. MATHIAS, both of Haines City Citrus Growers Ass'n, Haines City, Florida.



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With the all-new Model 200 C.P., John Bean offers a compact, versatile Speed Sprayer in the attachment price range. Designed especially for the grower with a small acreage of large trees or a medium acreage of small trees, the new 200 C.P. gives you big Speed Sprayer features at an attractive price. Tandem wheels that are specially designed for added flotation also make possible a narrow tread width for spraying closely planted trees and bush-grown crops. Sprayer quickly adapts to one or two-way delivery. Features include convenient, tractor-mounted controls, "Bean Bond" rust and corrosion proof tank, adjustable external air deflectors, rugged Royalier high pressure pump and a clutch that permits the fan to be stopped while engine and pump continue operating.

USE IT YEAR AROUND for all these jobs and more.

A hose and gun attached to the Model 200's high pressure outlet and you're all set to do a variety of spraying jobs including:

- KILL FLIES & MOSQUITOES
- EMERGENCY FIRE PROTECTION
- CONTROL LIVESTOCK PESTS
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- CLEAN TRUCKS & IMPLEMENTS
- PROTECT GARDENS
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YOU'RE INVITED TO A SEEING-IS-BELIEVING DEMONSTRATION in your orchard. Your John Bean Dealer cordially invites you to ask for a free Speed Sprayer demonstration under your own specific field conditions. He'll gladly help you select the model or attachment that fits your spraying needs exactly.

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NUTS

A Secure Future

"YOUNG men who are interested in future security should consider the establishment of a pecan orchard," says D. McCrea of Yancey, Tex., owner of perhaps the largest improved pecan orchard in south Texas and one of the most modern pecan shelling plants in the state.

McCrea started his orchard of 4000 trees on some 225 acres only five years ago, yet in 1960 almost all of the five-year-old trees produced a crop of pecans. The varieties are chiefly Western Schley and San Saba Improved with a few others such as Mahan. They are planted 60 feet apart in rows spaced 30 feet apart.

One of the secrets of McCrea's success is keeping down the weeds and grass around the trees so that they can get full benefit from the available plant food and moisture.

A balanced fertilizer such as 4-10-4, 5-10-5, or 6-12-6 is applied at the rate of 10 to 25 pounds per tree in February or March. The amount used depends upon the age and size of the tree. The fertilizer is spread under the trees as far out as the tree limbs extend but no closer than 2 feet from the tree trunk.

Water is applied periodically to each tree by tank truck. Previous to using this method, McCrea tried flood irrigation but it proved too costly and required too much additional labor. Moisture is conserved by a mulch of pecan hulls from McCrea's shelling plant.

McCrea uses a malathion spray in the spring to control case bearers, his most serious pecan pest. He also adds 2 pounds of zinc sulfate to each 500 gallons of water and insecticide since he believes that pecan trees require zinc. If there is evidence of case bearer damage after the first spray, a second application is made in one or two weeks.

At an age when most men are thinking of retiring, McCrea shows keen enthusiasm in the care and development of his pecan orchard. The proper care is paying dividends and he is adding to the number of trees each year. "I would rather have a good pecan orchard than almost anything I know of for security," he says.

● Propagation of Plants, by M. G. Kains and L. M. McQuestion. A practical guide on the working methods of plant propagation. For the commercial plant propagator as well as the beginner. 639 pages \$4.95. Send check or money order to AMERICAN FRUIT GROWER, Willoughby, Ohio.

AMERICAN FRUIT GROWER

CYPREX® TAKES THE WORRY OUT OF SCAB CONTROL

*Cyprex gives you protection or eradication —
or both — whatever the season or your situation
demands. It offers flexibility in scab control
possessed by no other modern fungicide*



CYPREX GIVES YOU PROTECTION OR ERADICATION OR BOTH... UNBEATABLE SCAB CONTROL

Cyprex sticks. It spreads and redistributes on foliage. It penetrates into the leaf and protects "from the inside out." It reaches into leaves to eradicate scab. It's the toughest, longest-lasting protection against scab developed in the last 50 years. And the most flexible.

Cyprex fits your crop, your weather, your program! Simply by varying the rate, Cyprex gives you top protection... or eradication... or both. And, whichever way you use it, you're getting the most effective program you can buy.

How Cyprex protects against scab

Cyprex sticks tight because it has a built-in sticker. Cyprex spray spreads a tough, fungicidal barrier over the leaf that stays... and stays... even during heavy rains.

Cyprex "covers up" new growth that appears between sprays. It's so potent against scab that tiny quantities — moved from sprayed foliage to new growth by splash—will spread out and give protection. How can Cyprex stick tight, yet spread in heavy rains? Well, it's something like trying to rinse pure detergent from a pail or glass—a small amount foams out, but most tends to stay put.

Cyprex penetrates foliage and protects leaves against scab from the inside out by killing scab spores before they can become established. This is called "local-systemic action."

Cyprex resists weathering both because of its built-in sticker and because of the local-systemic action working inside the leaf. It lasts for days through heavy rains.

Cyprex gives you the most economical protection you can buy. Cyprex gives you all this protection at rates as low as ¼ pound per 100 gallons from green tip to first cover... and with as little as ⅓ of a pound

in cover sprays. For performance delivered, Cyprex is the most economical scab control chemical you can buy.

How Cyprex eradicates scab

At times even the most careful protection schedule breaks down. Here's why Cyprex can help you through such emergencies.

Cyprex penetrates the leaf to root out scab. The powerful "kickback action" of Cyprex seeks out and destroys scab fungus up to 28-30 hours after the beginning of the wet period when used at the ½-pound rate, and up to 36-48 hours at the ¼ lb. rate! These timings are conservative because they apply to the most favorable temperature and moisture conditions for scab growth. And remember, when you use Cyprex as an eradicant, you automatically give your crop continuing protection.

Cyprex protects fruit in storage

Cyprex keeps on protecting the crop even after the fruit is in storage by keeping out pinpoint scab that so often shows up after the fruit is off the tree.

NEW FOR 1961:

Cyprex gives you the most economical protection you can buy. Because of its potent record against scab, Cyprex has been accepted by the USDA for protectant use at the new low rate of ¼ to ⅓ lb. per 100 gallons through first cover, and ⅓ to ½ lb. for later sprays! This means that, as amazing as Cyprex scab control is, its price is even more amazing; you pay no more for a protectant schedule with Cyprex than for a so called "low-cost" fungicide.

Now, all-season protection. In 1961 you can use Cyprex from green tip up to 7 days from harvest!

Cyprex suppresses mites

Cyprex kills European red mites as they hatch. That's why grower after grower on a Cyprex program reported little or no red mite problem. A typical comment: "... mites just never did build up in my orchard."

HOW TO USE CYPREX

Protection schedule. Use ¼ to ½ lb. of Cyprex 65W in 100 gallons of spray at 5 to 10-day intervals or as needed to maintain scab control, in prebloom sprays through first cover applications. Use ⅓ to ¼ lb. in following cover sprays, as needed.

After-infection (eradicant) schedule — (For growers who have not used Cyprex on a protectant schedule or for growers on a protectant schedule who have badly missed timing during infection periods.)

Use ½ lb. or ¾ lb. of Cyprex 65W per 100 gallons of spray during or following a rain, from green tip through first cover applications and in later sprays as needed. Timing will vary depending on temperatures but it is recommended that application be made within 28-30 hours from the start of a wet period when using the ½ lb. rate and within 36-48 hours when using the ¾ lb. rate.

Miscellaneous information. Do not apply Cyprex within 7 days of harvest. Cyprex is compatible with most commonly used insecticides and fungicides. It is not compatible with lime and should not be combined with oils or oil emulsions. Cyprex can be used in concentrated sprays, but concentrations higher than 5X are not recommended. Cyprex has no effect on bees when used at recommended rates.

The label instructions on Cyanamid products, and on products containing Cyanamid ingredients, are the result of years of research and have been accepted by Federal and/or State Governments. Always read the labels and carefully follow directions for use.



Cyprex is available from your local spray materials distributor in 2½ lb. bags, packed 20 to a master bag, and in 25 lb. cartons.

Wherever fruit is grown... in the Northeast, Midwest, the Shenandoah, in Hood River, the Okanogan, in California... everywhere growers have used Cyprex, they consistently get results like these:

"Substantial savings resulted from our Cyprex schedule because we used 4 less sprays than last year. It gave me outstanding scab control in a bad scab year."
Wolcott, N. Y.

"We couldn't grow apples without Cyprex. Without it we'd have a real loss in scabby apples. Before Cyprex there was no fungicide that would control scab in bad infection years."
Milton-Freewater, Oregon

"No pin-point scab in storage on fruit sprayed with Cyprex. Fruit without Cyprex had pin-point."
Hood River, Oregon

"Cyprex has 100% covering power ... sticks to fruit and foliage during heavy rains... something no other fungicide has been able to do."
Nashville, Indiana

"Long kick-back action ... got excellent results with Cyprex after heavy rains."
Lacota, Michigan

"Longer interval between sprays with Cyprex ... and excellent scab control."
Levens, West Virginia

©CYPREX is American Cyanamid Company's trademark for n-dodecylguanidine acetate (dodine).



...AND CYPREX HELPS YOU SELL YOUR FRUIT, TOO!

Look over this brand-new program to sell your apples, sponsored by American Cyanamid Company, the developer and manufacturer of Cyprex fungicide! It's designed to help you market your crops by helping move apples out of stores and into homes all across America! From

September till Christmas, when much of the new crop moves to market, these advertisements will appear in *TV Guide Magazine* in the 4 most heavily-populated areas in the country. They will constantly remind five-and-a-half-million readers of *TV Guide* that there's nothing more

satisfying, more healthful, more delicious than a juicy, new-crop apple! American Cyanamid Company is proud of this advertising "first" for pesticide manufacturers in the field of apple marketing.

This advertising campaign in *TV Guide* will remind millions of viewers that TV is more fun... with apples.

**TV
GUIDE**

REACH

FOR AN APPLE
TO ENJOY WITH YOUR
FAVORITE WESTERN



HANDS UP

FOR AN APPLE
WITH YOUR
FAVORITE MYSTERY



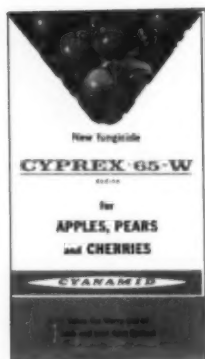
ROAR

FOR AN APPLE WITH
YOUR FAVORITE COMEDY



Discover

THE TANGY TASTE
OF AN APPLE WHILE
YOU WATCH YOUR
FAVORITE ADVENTURE SHOW



Free leaflet tells all about Cyprex for apples, pears, cherries. Write for leaflet PE-5061. American Cyanamid Company, Agricultural Division, 30 Rockefeller Plaza, New York 20, N. Y.



CYANAMID SERVES THE MAN WHO MAKES A BUSINESS OF AGRICULTURE

THE QUESTION BOX

Don't be perplexed! Send us your questions—no matter how big or small. A 4-cent stamp will bring you an early reply. Address: The Question Box, AMERICAN FRUIT GROWER, Willoughby, Ohio.

PERFORATED PIPE?

In your November "Letters to the Editor" column, Robert Ruf mentions perforated irrigation pipe. Where can I get it?—Michigan.

W. R. Ames Co., 1001 Dempsey Rd., Milpitas, Calif., or Tampa, Fla.; Race and Race, Inc., Winter Haven, Fla.; Wade Rain, 1919 N.W. Thurman, Portland 9, Ore.

HOW TO KILL SPANISH MOSS

What can I do to get rid of Spanish moss in my pecan trees. The moss is retarding their growth.—Louisiana.

Spray with a 10-2-100 Bordeaux mixture before growth begins this spring. This mixture contains 10 pounds of copper sulfate, 2 pounds of lime, and 100 gallons of water.

During the growing season (in June or July) apply a 6-2-100 Bordeaux mixture to control leaf diseases as well as kill the moss.

The wind will usually blow the dead moss off the limbs.

ARE ALMONDS SUITABLE?

Would you recommend Hall's almond for northwest Florida? Also, which blueberry varieties might do well here?—Florida.

Hall's almond has not been tried in Florida. According to Dr. John W. Sites of University of Florida, almond trees have not been satisfactory there for several reasons, one of the principal ones being that the nuts discolor rather badly in the high rainfall climate. Two low chilling almond varieties available for Florida are Jordano and Nonpareil.

The only blueberries for possible use in northwest Florida are Homebell, Callaway, and Tifblue. All are rabbiteye blueberries at least partially adapted to Florida conditions.

WANTS STRAWBERRY PLANTS

Some time ago you mentioned that Sioux and Arapahoe strawberries taste like the wild berry. Where can I get these varieties?—Illinois.

McNeal Berry Nursery, Hamilton, Mont., has Sioux. Arapahoe is available from Kroh Brothers Nursery, Loveland, Colo.

MULCHING MACHINE NEEDED

Where can I get a machine which shreds bales of straw and spreads it over strawberry plants?—North Carolina.

Friday Tractor Co., Hartford, Mich.

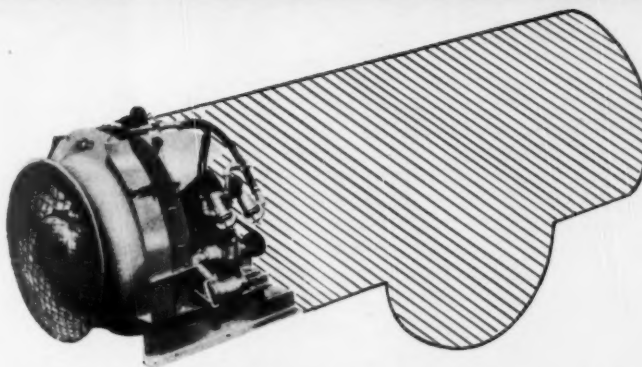
PEACH SOURCE

I'm interested in the new Washington peach mentioned in a recent issue. Are trees available?—Missouri.

Try Waynesboro Nurseries, Waynesboro, Va.; Shahan Nurseries, Tullahoma, Tenn.; New York State Fruit Testing Assn., Geneva, N.Y.; Kelly Brothers Nursery, Dansville, N.Y.; J. O. Nicholson, Coshocton, Ohio; and Peach Ridge Nursery, Clemson, S.C.

FEBRUARY, 1961

SURE-YOU CAN PAY \$2000 MORE - BUT WHY?



BESLER POWER PACKAGE

gives you a modern air sprayer
for about half cost!

You need not pay a high price for a modern air carrier sprayer.

With a Besler Power Package you have a complete air carrier sprayer, less tank and trailer. It attaches simply, in less than a day, to your tank and trailer.

Not just a blower attachment, the Power Package includes pump, valves, strainers, agitator drive, etc., as well as blower. The only attachment of its kind on the market. Proven on hundreds of thousands of acres.

With 35" axial flow 8-blade fan, VR4 engine	\$2595*
With 30" axial flow 8-blade fan, VG4 engine	\$1895*
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*Prices subject to change without notice.

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From Start . . .

FOR BETTER FINISH, BETTER COLOR, AND A BETTER HARVEST

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NIACIDE

AN EXCEPTIONAL NEW FRUIT FUNGICIDE, PERFORMANCE PROVED

Wide scale commercial use again in 1960 has proved that Niagara Niacide offers the finest degree of control over apple scab and other fungus diseases. Growers unanimously report Niacide has upgraded their harvests by producing fruit of the highest color, finest finish. They commend Niacide as an exceptionally bland fungicide. It leaves no objectionable spots on

either fruit or foliage. And, unlike some of the newer organic chemicals, it has been used with complete safety and uniformly good results on all russet-susceptible varieties.

If you would like to profit from a "start to finish" Niacide program—raise a better crop of better keeping apples—see your Niagara field man now.



to finish



BEST BY TEST

There is no fungicide on the market that has performed as consistently well from the standpoint of control of apple scab, compatibility with all other materials and safety to foliage and fruit finish as Niacide. Ask your Niagara field man to show you the proof back of this statement or write us.



Putting Ideas to Work

FOOD MACHINERY AND CHEMICAL CORPORATION
Niagara Chemical Division

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FUNGICIDE

MOST EFFECTIVE, LOW-COST CONTROL!

COSTS LESS THAN OTHER LEADING FUNGICIDES

Phygon-XL for apple-scab control

You get cleaner fruit, better yield with this low-cost control. Phygon-XL, the orchard fungicide, can sizably increase this year's apple profits at very little cost to you. This easy-to-use fungus killer gives excellent control of apple scab, brown-rot blossom blight and leaf curl, California blight and many other diseases. Product of United States Rubber Company, Naugatuck Chemical Division, Naugatuck, Connecticut. Harmless to pollen and bees, does not affect odor or flavor of fruit.



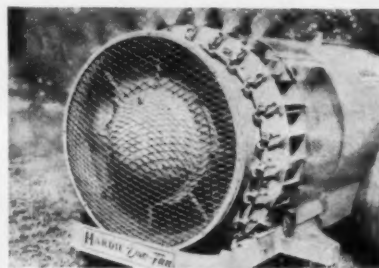
United States Rubber

Naugatuck Chemical Division

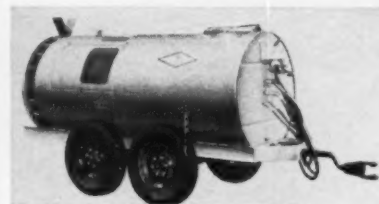
Dept. A Elm Street, Naugatuck, Connecticut

producers of seed protectants, fungicides, miticides, insecticides, growth retardants, herbicides: Spergon, Phygon, Aramite, Synklor, MH, Alanap, Duraset.

Latest in SPRAYERS



Hardie's Duo-Fan air-blast sprayers feature two aluminum axial flow fans, stainless steel tank.



John Bean's Model 200-CP Speed Sprayer is new high-pressure unit for small to medium orchards.



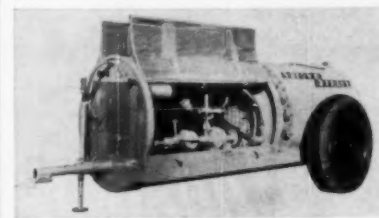
Vandermolens's KWH Mistblower 708 creates fine mist, applies up to 10x concentrations.



Skibbe's 200-gallon sprayer has 20 gpm pump, plastic-lined tank, and mechanical agitation.



Potts 7-HP Mist Blower weighs 235 pounds, can be mounted on tractor, pick-up truck, or Jeep.



New Besler sprayer has blower in center, offers field adjustment of air volume and velocity.

AMERICAN FRUIT GROWER

FRUIT-O-SCOPE

SPECIAL MARKET REPORT

FEBRUARY, 1961

AMERICAN FRUIT GROWER

What's the market outlook for apples during the rest of the 1960-61 season? Processor demand, especially for canning apples, and consumer demand for both fresh and processed are expected to continue strong. Perhaps partially offsetting are the less favorable prospects for exports mainly because of larger 1960 apple crops in western Europe and the smaller crop at increased prices in the United States. In short, the market outlook is better than the outlook a year ago.

Cranberries are making a strong comeback. Industry spokesmen are concerned, though, about marketing the record 1,344,000-barrel crop. Due to lack of funds when sales were cut off after the 1959 debacle, the industry cut down on advertising. Indications are, however, that the public has regained complete faith in the tart red berry.

Current packaging practices out-of-date? Studies in Alabama indicate that growers are losing several million dollars a year because of poor fruit and vegetable packaging. Chief packaging failures are use of open-top containers which don't give protection during handling and shipment . . . use of odd-size containers which cause trouble in stacking. Sturdy, clean containers will mean more money in the pocketbook.

With a bit of luck and some sound promotion, pear growers in California hope to breathe new life into an old and almost forgotten market—dried pears. California Canning Pear Association has taken an interest in the project and will help promote dried pears in an effort to find a new outlet for the crop.

Researchers in Georgia report that pecan butter shows great promise as a new end product of the state's pecan crop. With a little imagination they can see it approaching the economic importance of peanut butter. Several business firms are definitely interested.

Trouble ahead for growers in the Imperial Valley of California? It's reported that Agricultural Workers Organizing Committee, which signed up some pickers of fruit and other products in 1960, is starting unionizing efforts in the valley.

An "apples for cholesterol control" program has been started by Washington State Apple Commission as another good tool for apple selling on the health front. Plans call for reprint permission from Time magazine and tie-in trade and consumer advertising.

Florida citrus exports face a big year. "Sales potentials for frozen orange and grapefruit concentrate are almost unlimited, provided dollar restrictions are removed," says Bob Rutledge of Florida Citrus Mutual. Great Britain consumes more than half of all juices sold in Europe, and West Germany, Switzerland, France, Belgium, Netherlands, and Luxembourg all offer expanding markets.

Total fruit exports for fiscal year 1960 were 16% of the United States 1959 production . . . included \$110 million fresh fruits, \$54 million canned, \$43 million fruit juices, and \$37 million dried fruits.

Frozen apple juice may be in your grocer's freezer soon. USDA's new frozen apple juice concentrate passed a 10-week consumer test in Fort Wayne, Ind. . . . received favorable public reaction.

STATE NEWS

The Business Side of Fruit Growing

WEST VIRGINIA

\$5000 Offer

CONSOLIDATED Orchard Co., Paw Paw, is offering \$5000 to the discoverer and owner of a true sport limb or a single Golden Delicious tree that produces russet-free apples under normal eastern growing conditions.

In announcing the offer, Henry W. Miller, president of the company, said he believes that such a sport may now be growing and sooner or later will be discovered.

It is to encourage a thorough search for such a russet-free type that the company is making the offer, Miller said.

WASHINGTON

Meeting Highlights

ONE of the key subjects discussed at the 56th annual meeting of Washington State Horticultural Society, held in Yakima December 5-7, was agricultural labor, according to John C. Snyder, secretary-treasurer. Closely allied with this topic, or perhaps more accurately a part of it, was mechanization.

It may be concluded from the labor discussion that agriculture must take a positive approach in planning its future program. Based upon factual information at hand, it must plan the kind of program that will strengthen the industry as a whole, including its labor staff. In view of opposition to such a program, this will challenge the best thinking and judgment of the entire industry.

In discussing small versus standard trees, the convenience of handling small trees stood out as an important

advantage. There seems little question but that small trees can produce high tonnage per acre. On the other side of the ledger are a long list of unknowns—spacing, supports, variety and stock relationship, diseases, and pruning. Much more research information is needed.

Various means of producing small trees were brought to light. It was pointed out that there are practices other than using dwarfing stocks that should be considered. A tree that starts bearing early stays small longer than one that is late in coming into bearing.

Pruning and fertilization practices can well be adjusted to encourage early bearing. Being sure of good pollination when the tree is small is a technique that is sometimes overlooked. The use of spur-type trees is a practice that offers real possibilities.

The question box was of much interest, with almost twice as many questions compared with previous years. Although all these questions were not answered during the meeting, they will be in the printed Proceedings, a copy of which may be obtained by sending \$3 to John C. Snyder, secretary-treasurer, Washington State Horticultural Association, Pullman, Wash.

PENNSYLVANIA

Westerners Move In

TREXLER Orchards in Allentown changed owners officially in December when the title passed to the Davis-Eadington interests of Fullerton, Calif. Completion of the Trexler purchase will add to the already sizable peach and apple tonnage marketed by the Davis-Eadington group from the Appalachian area. Earlier in the year the organization purchased Dillon Orchards in Hancock, Md.

IDAHO

Insurance Protection

AT the 66th annual meeting of Idaho State Horticultural Society in Boise, growers passed a resolution asking the state legislature to enact a liability law similar to that for automobile owners as protection for fruit growers whose spray chemicals damage neighboring crops.

The resolution set a minimum of \$10,000 and \$20,000 with "no limit



New president of Idaho State Horticultural Society is Kent Kirk, Payette, seated at left. The immediate past president, seated at right, is L. E. Bolt, Emmett. Standing, left to right, are Leslie "Buck" Selders, Homedale, vice-president, and "Tony" Horn, Boise, secretary.

on the top," it is reported. Similar insurance or bond protection is being sought for commercial applicators hired by fruit growers.

In a resolution entered by the society's apple committee, growers were asked for a voluntary assessment of one-half cent per bushel of apples, with the money to be used "for the betterment of the apple industry."

Leland Fife, director of the State Bureau of Plant Industries, reported that the 1960 commercial fruit tree census for Idaho showed 709 orchards compared to 941 in 1954. There were 1,141,056 fruit trees recorded in the state in 1960, up 5% from 1958, with apples and prunes the leading crops.

UTAH

Tax Break Sought

AT the Utah State Horticultural Society meeting held in Salt Lake City, growers voted to seek congressional legislation which would permit income tax payments to be based on income over a five-year period. Basis for the resolution is the great fluctuation in income from year to year in the industry.

Other resolutions passed included a request to the state department of agriculture to prevent importation of fruit from areas where cherry fruit fly and pear psylla are known to be present.

Growers also asked that no legisla-



Officers of Washington State Horticultural Association for 1961 include (left to right) Arthur W. Enbom, Yakima, first vice-president; Irvin R. Woods, Omak, president; and Ezra Crist, Wenatchee, second vice-president. John C. Snyder, Pullman (not shown), continues as secretary-treasurer.



Sprayer: Hardie Duo-Fan

**Always!...the speed you want...
the pull you need**
with an International® 460 Utility

Equipped with Torque Amplifier drive, you get 10 speeds forward with the International 460 Utility, from $1\frac{1}{4}$ to $16\frac{1}{2}$ miles per hour at full throttle. You get more than three tons drawbar pull to haul loaded sprayers over soft ground and up steep slopes. Then, for good going, when the load is light, just throttle back and shift to a higher gear. The Multi-Range, six-cylin-

der engine—gasoline or Diesel—purrs along at part throttle to save on fuel. With Torque Amplifier and Multi-Range engine you can *always match speed to the load*. You get today's top-notch combination of pull-power, timesaving operation and fuel economy in the 48 drawbar horsepower class!

Ask your IH Dealer to demonstrate. If you wish, he will gladly arrange payments on a harvest income basis.



Fork Lift: Harlo

At picking time, quickly attach a front-end lift and Fast-Hitch rear forks to lift, transport, load, and unload two 20-bushel boxes—save countless manhours.



INTERNATIONAL HARVESTER

INCREASE ORCHARD PRODUCTION AT LOWER COSTS...

...mulch with a
FITCHBURG Farm
CHIPPER



Tree trimmings are one of your best and cheapest sources of mulch. A Fitchburg Farm Chipper will reduce prunings quickly to moisture-holding wood chips. You eliminate the job of hauling brush.

A mulch of wood chips keeps weeds down... discourages rodents... gives orchards better tilth... a moisture-holding capacity to bring trees through dry spells.

Fruit trees yield more fruit, larger fruit, fruit that ripens earlier when local fertilizer requirements are supplemented with five to seven inches of wood chips around the trees. "Drops" are cushioned, bruise less, and are easier to find.

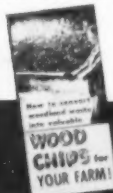
You will find the Fitchburg Farm Chipper a working machine in your orchard:

- The high chrome steel blades are tough and will need only periodic sharpening.
- Fitchburg Farm Chippers require only minimum maintenance to keep them ready to work.

Anywhere you can drive your tractor, you can chip prunings with a Fitchburg Farm Chipper. Combine your work, chip your tree trimmings with a Fitchburg Farm Chipper, and mulch your orchard in ONE SIMPLE OPERATION.

This Fitchburg Fact Folder will tell you about Fitchburg's exclusive: One Year Guarantee—Patented Safety Spring-Activated Feed Plate—with complete machine specifications included.

A Farm Chipper's cost of from \$650 is soon returned by your increased fruit production, the lowered farm labor costs. Find out how a Fitchburg Chipper will fit your orchard.



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tion be enacted prohibiting employment of youngsters to harvest strawberries, cherries, and other crops; also that assessment of farm land adjacent to urban or industrial property be based on the land's productivity rather than its anticipated residential or commercial use.

Vern Stratton, Orem, was elected president of the society and George A. Nielson, Jr., Brigham City, vice-president. Anson B. Call, Jr., Logan, was re-elected secretary-treasurer.

NEW JERSEY

Conference Scheduled

"FACTORS Affecting Fruit Condition" is the name of a conference scheduled for February 15-16 at Rutgers University, New Brunswick. Leading cold storage workers throughout the East and from the West Coast will take part. Growers are invited to attend as well as research and extension personnel.

CALIFORNIA

\$\$ Flow In—and Out

IN the first roundup of statistical reports on the 1960 season, California growers have discovered they were paid \$553,505,000 for 6,947,000 tons of all variety of fruits and nuts harvested last year.

At the same time they scanned production cost figures that have absorbed almost all of their receipts. And, as well, they are becoming aware that the 1961 season may have an even more dismal outlook.

The No. 1 villain in the California fruit industry's efforts to balance profit and loss ledgers is farm labor. The cost of farm labor took an upward jump last year and will probably average out in the coming season about 25% higher than the 1955-60 average of farm wages.

At the same time growers are confronted with cost demands for labor-saving machinery and substantial levies to finance their battle against the AFL-CIO campaign to unionize farm workers.

Apricots, avocados, cherries, grapefruit, lemons, nectarines, olives, and walnuts showed higher production in 1960 than in the previous year. The production of deciduous tree fruits was the third largest on record despite lighter crops of apples, freestone peaches, pears, and plums. Grapes and tree nuts continued high level production.

Deciduous tree fruits, produced on 307,623 acres in 1960, delivered a harvest of 2,014,400 tons, valued at \$191,324,000. Tonnage was down last year by 85,000 tons and farm payments declined by \$6 million.

None of the commodities escaped



MOORE JOINS NAI

New administrative assistant for National Apple Institute is James Moore, Wayne, Pa. former national product manager of produce packaging with Container Corporation of America. Moore will become executive vice-president of NAI on July 1, 1961.

higher costs last year and some of them faced aggravated expenses because weather conditions compelled extra cultivation work in irrigation and thinning of heavy sets. Although there were only 99 actual labor strikes in the opening gambit of the Agricultural Workers Union's organizational campaign, the constant menace of labor trouble resulted in extra charges through higher wage rates and premium charges for labor management.

Weather conditions, such as dormancy and precipitation, are improved for the 1961 season to date but there doesn't seem to be any escape from the added burden of labor expense.

FLORIDA

Rebirth of an Industry

THE Sunshine state may be easing into the lemon industry, according to reports from researchers who attended the last annual meeting of Florida State Horticultural Society. Several varieties of lemons already are available for planting and additional new ones are being tested.

In Florida lemons are harvested green in August and kept in ripening rooms at 50° F. until their color changes to a bright yellow. At that time they are of marketable size, the researchers say, and compare in quality with California lemons.

If the lemons are allowed to remain on the tree and grow larger, they are later processed and sold for juice. These lemons yield much larger quantities of juice than do California lemons.

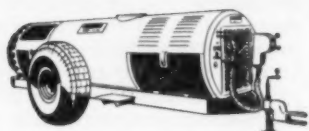
At one time Florida produced large numbers of lemons until scab and competition from California combined to kill the industry.

READY FOR A SPRAYER?

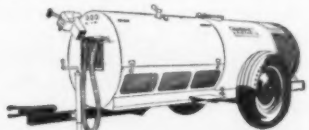
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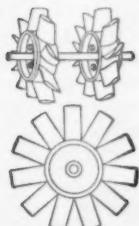
HIGHEST PERFORMANCE LEVEL OF ANY SPRAYER IN THE WORLD...



HARDIE DF-520 "DUO-FAN" AIR BLAST SPRAYER
Perfect for the medium size grower, delivering over 62,500 cubic feet of air per minute.



HARDIE DF-480 "DUO-FAN" AIR BLAST SPRAYER
Perfect for the smaller grower, delivering over 40,000 cubic feet of air per minute.



"DUO-FANS" EQUAL ONE BIG FAN

Hardie exclusive patented "Duo-Fan" assembly is standard equipment on all sprayers. Delivers 30% more air volume than conventional axial flow fans.



AIRCRAFT TYPE REMOTE CONTROLS

Dependable... Proven... Hardie aircraft-type remote controls are simple, rugged, controls throttle and spray delivery on one or both sides.

That's just what you get... no matter which of the many models you choose. Measured by any standard, judged by any detail, the HARDIE Duo-Fan, two fan sprayers are the greatest and most advanced sprayers ever built.

Not only are these sprayers bigger than ever before, but each and every part right down to the nozzle tips saves time and labor, and cuts maintenance costs to the vanishing point. HARDIE sprayers simply are bigger and stronger than any other sprayer on the market.

Just look at the many exclusives: HARDIE sprayers permit you to adjust nozzles, even change tips easily and quickly in the field. Spray the largest trees on BOTH sides of the row, and meet the most gruelling tests with more than ample capacity and power. HARDIE sprayers give you adjustable air guide vanes to meet your most exacting requirements. HARDIE gives you two large aluminum axial flow fans which provide more working area than any other sprayer in its class. HARDIE gives you stainless steel tanks, stainless agitator shafts, stainless agitator paddles, stainless drive tubes, all stainless interior piping. HARDIE gives you dependable proven aircraft-type remote controls. Heavy duty construction, simple design, easy to operate. Controls throttle and spray delivery on one or both sides. **HARDIE HAS JUST THE SPRAYER FOR YOU...** The DF-480 delivering over 40,000 cubic feet of air per minute, and made for the smaller grower... The DF-520 delivering over 62,500 cubic feet of air per minute, and made for the medium size grower... The DF-800 delivering over 97,500 cubic feet of air per minute and made for the larger grower.

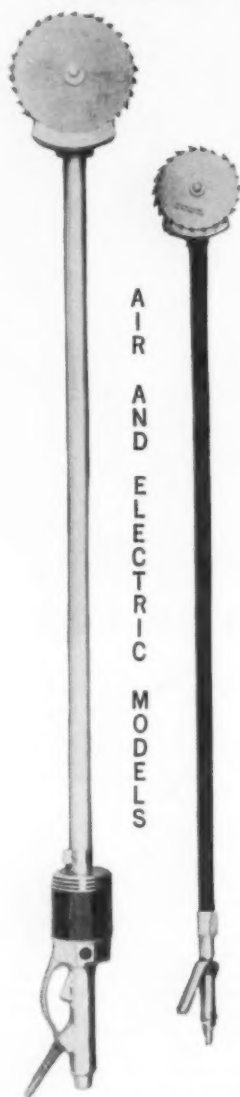
There are many more exclusives in the more than 17 Duo-Fan Models you can choose. See your HARDIE Dealer soon, or fill in and mail the coupon below today.

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SERVING THE FRUIT GROWERS FOR MORE THAN 66 YEARS

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Fastest pruning tool
ever devised



A circular saw turning 10,000 R.P.M. on the end of a light weight shaft with shielded and sealed grease packed ball bearings throughout. Available in various lengths. The unit is electric or air driven. The fast cutting 8" blade, mounted on rugged-built gear head assures clean cuts, with no bruised or crushed wood to cause rot. Moderately priced, the first pruning job usually pays for the tool.

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MARKETING

Secret Weapon In Prunes

THE secret weapon of the California prune industry—the one area of the West Coast fruit world where profits have been stable for many years—is prune juice which has absorbed more of prune production in the past dozen years than the export market.

No other prune product so far developed has caught consumer fancy to the extent that prune juice has. And there is evidence that popular acceptance can be stimulated to a far greater extent in any prune production period where the raw product price will be favorable to juice manufacturers.

Utilization of prunes for manufacturing of juice and concentrate reached a peak in 1956 when raw product costs were relatively low. Utilization declined sharply in the next two years as retail prune juice prices reflected the sharply higher raw product costs. In 1959 utilization began to rise again as product price and popular demand came into adjustment.

But the important factor to some prune producers is that juice use exists as an important outlet for prunes if production rises to the levels anticipated on the basis of new plantings in California.

Bearing acreage in California last year was reported at 80,300 acres which produced 138,000 tons of prunes with a total farm value of \$53,130,000. Farm advisors say that by 1965 acreage will be up to 105,000 acres, most of it in the Sacramento Valley where yields per acre will be greater than in the old prune centers of Santa Clara Valley and Sonoma County.

Thus, eventually, California prune growers face the same type of supply disposal problems that now confront peach and other West Coast fruit growers. Potentially, of course, there is always the export market which once took half of the California prune output—more than 108,000 tons in the 1930-35 era.

By the end of World War II the volume exported was under 30,000 tons. Exports began to climb again in 1949 and went as high as 60,500 tons in 1957. But they are currently averaging under 40,000 tons and it is doubtful that California prune exports will ever again reach the pre-war volume. New sources have become available. The French, for example, are currently expanding their prune orchards in an effort to



EVERYTHING'S PEACHY

Among commodity leaders attending the annual meeting of Pacific Coast Co-operative Marketing Association held in San Francisco, Calif., were, left to right, Fred Mahre, president, Washington Freestone Peach Association; George Crum, president, California Freestone Peach Association; and Vernon Howard, director, Washington Freestone Peach Association.

dominate the European Common Market region, and quality improvements are being made in overseas orchards where costs of production are far lower than in the United States.

If production in prunes moves upward, effective planning for usage will have to place strong emphasis on uses beyond consumption of prunes as prunes.

Even if the export market can be expanded, the expansion may have to be in large size fruit which are in demand in overseas countries where the standard of living has climbed. Formerly, the export market provided a ready outlet for the cheaper small prunes but these may go into such supplementary uses as juice, concentrates, pitted prunes, jams, powder, puree, and prune butter.

The juice market—extremely strong in the heavily populated regions of the East and Central States—seems the best promotional bet since it has absorbed about half a million tons—about 100,000 tons more than the export market—in the past dozen years.

If the merchandising "private eyes" can find the essential clue to why New Englanders and New Yorkers drink five times the amount of prune juice consumed by West Coast aficionados, the prune industry may have a bright and shining future.—William J. Monahan.

Prevent Carry-Over

IN a retail store study conducted by F. E. Cole and W. J. Lord, University of Massachusetts horticulturists, broken skin and bruises were the principal defects of apples found on retail counters. The horticulturists believe that inferior fruit condition, inadequate rotation of the packs by the produce manager, and failure to

AMERICAN FRUIT GROWER

remove packages of apples from the display counter having deteriorated fruit account for a large percentage of bruised and punctured fruit.

All growers servicing retail stores, except those who make tailgate delivery only, could well remove any bags on display containing deteriorated fruit, the horticulturists point out. An adequate arrangement can be made between the store and the grower in regard to replacement.

One way of denoting packing dates is to use different colored twists of tapes on the apple bags. Growers who have tried this coding device have found that it is useful to the produce manager as well as to themselves in keeping unsold apples from the previous delivery separated from the most recently delivered lot, the horticulturists report.

Frozen Apple Juice

In a 10-week market test conducted in Fort Wayne, Ind., USDA's new frozen, high-density (6-to-1) apple juice concentrate received favorable public reaction. Three-fourths of the users said they would probably continue to use the product if it were commercially available.

Most of the consumers praised the flavor of the apple juice and were unanimous in saying they did not find it inconvenient to reconstitute the 6-to-1 concentrate. Of particular interest to the apple industry is the fact that the new product attracted a majority of its users among households not otherwise using processed apple juice.



NEW ONE-POUND PACK

Sturgeon Bay Fruit Growers Co-operative at Sturgeon Bay, Wis., has introduced a one-pound pack of apple sauce in metal cans lithographed in four colors. Spices accent flavor without leaving spicy taste to sauce. Back panel includes apple sauce recipes. Cans supplied by Continental Can Co.

FEBRUARY, 1961

*hand-thinning
is old-fashioned!
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AMID-THIN

(contains naphthylacetamide)

Amid-Thin has been cleared for use
by the U.S. Department of Agriculture

**chemically thins
fruit, eliminates
expensive hand
thinning!**

**Improved size and
quality of fruit!
will induce annual
bearing!**

**can be used early
without injury to
foliage or fruit!**

You get better, more consistent thinning when you use Amid-Thin! And that means you eliminate hand-thinning—one of the most expensive and practically impossible chores in orchard operation today.

Used safely, *without injury to foliage or fruit*, Amid-Thin helps induce shoot growth, larger fruit because of leaf-fruit ratio more favorable to fruit. Use of Amid-Thin has produced increased bloom in "off" years. This aid in breaking biennial bearing helps uniform annual production. And its wide range of safety at concentrations needed for thinning reduces chance of overthinning as compared to other commercial chemicals.

Commercial orchards have proved Amid-Thin's economy and effectiveness over the past five years. For bigger, better, more saleable fruit—try Amid-Thin!



AMID-THIN

Amchem and Amid-Thin are registered trademarks of
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You can stop this kind of damage ...the new low-cost Signode way

Signode steel strapping presents a simple and economical solution to the problem of main limb breakage.

The method does not harm or interfere with the growth of the tree. It has been proved in use...10,000 trees in one orchard alone have been strapped. Cost of materials runs only about 13 cents per tree. Application is simple, and may be made early in the growing season or after the harvest.

As any grower will recognize, elimination of main limb breakage is an important basic benefit that prolongs tree life, virtually eliminates orchard clearing costs, and stops sunburn losses that often result from main limb breakage. In addition, the strengthening of trees with this new method speeds harvesting with automatic shaking machines and minimizes tree damage from the use of such machines.

Send for Free Booklet "Strapping Orchard Trees"

You can get started at once using this new Signode way to stop main limb breakage in your orchard. Full details will be sent promptly, without charge. Branch offices in 71 cities—see "Strapping" in the Yellow Pages, or write



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Skibbe PRESSURE SPRAYER



**Big sprayer performance
at low cost.**

Pictured 200 gallon model, 20 gpm pump (500 lbs. — 8 pistons) features plastic lined tank, mechanical agitation and is extremely simple and maneuverable. Other model sizes: 15, 25, 50, 100 gallon with pump capacity 5 to 11 gpm.

Write for Literature

SKIBBE SEED & FERTILIZER SPREADER, SODUS, MICH.



By HENRY BAILEY STEVENS

Yakima Hit by Strike "YAKIMA fruit growers don't have to visit California to learn about strikes, picketing, and labor unions; they have an example right on 'fruit row,'" declares Bill Luce in a December message from that city.

"Growers' wives who have volunteered to keep the fruit moving through the packing houses are cursed and ridiculed twice a day as they pass the picket lines.

"The growers don't fear unionization, the payment of fair wages, or the provision of good working conditions. They do, however, fear the leadership of unions and the unjust rulings that can be handed down from a national labor-relations board dominated by labor itself.

"Attempts to poison the minds of workers in the present warehouse strike are apparent in the teamsters' publications. The boycott on all Washington apples is an example of unfair practice against an over-all industry in no way involved in the dispute.

"Growers are alert to the danger of a strike during the harvest of some perishable crop. But it will not be because the worker lacks a living wage or better working conditions. It will be because some union leader wants to get a foothold in the orchard labor field. The larger orchard holdings would be hit first and probably when the labor supply is short."

A Family Matter THIS business of wives running the gauntlet for the sake of an apple crop is something new in labor history. It doesn't happen in factories. It comes out of the agricultural way of life. Farm operations are close to the home. And this could be the saving grace in the situation.

On the average farm in this country the regular farm labor is also close to the home. The "hired man" has been like a member of the family. He knows full well the tight economic rope which the farm employer has to walk.

In general his sympathy is with the person who has to find the money to pay his wages. Such an employee would think it a dastardly act to "strike" when a crop is hanging on

AMERICAN FRUIT GROWER

the trees. From the unionization of such men agriculture would have little to fear.

Farmer and Worker Together AT the Florida Fruit and Vegetable Association meetings in Miami last fall W. H. Anderson, Jr., assistant general manager, said a mouthful: "We have got to get the idea out of the public's mind that the American farm worker is a chronic national welfare problem. His situation is actually a reflection of the economic situation confronting the American farmer."

"The problem faced by both is that our national policies have enabled the non-agricultural industries to enjoy an unprecedented economic growth that has far outpaced the economic gains that have been possible in the agricultural industry."

"The answer to the farm worker's economic problem will come at the same time and in the same manner as will the answer to the farmer's economic problems. It will come with the development of a sound economy on the farm as well as off the farm. It will come with higher grocery bills and more cash returning to the farm."

Let's Make It Real THERE is no secret about the program of the AFL-CIO to enter the agricultural field. Their executive council, meeting in Puerto Rico in February, 1959, voted to assess every member of every affiliate in the country one penny per month for six months for this purpose.

They talk national organization, but they have pinpointed their efforts on California's Central Valley, where—it is true—agriculture is most highly industrialized. They express concern about "full-time" farm labor; but their efforts to date suggest that the title "Harvesters' Union" would be more appropriate.

It would seem that the national agricultural organizations might well engage in public discussion with the AFL-CIO on this whole question. To the extent that there are still abuses under which labor suffers, let us admit the fact and pledge ourselves to help in their elimination.

It may well be that an honest-to-goodness organization of full-time agricultural labor is a dignified and desirable move. National agriculture certainly has as much at stake in this matter as national labor.

If the time has come when it is necessary that there be a union of agricultural employees, why not make it a bona fide one, composed of people who know first-hand what it is all about?

Address your "Windfalls" contributions to Henry Bailey Stevens, AMERICAN FRUIT GROWER, Willoughby, Ohio.

FEBRUARY, 1961



KELTHANE, the new longer-lasting miticide, is a real boon to any grower who must keep mite populations at a low level. Its success is attested to by growers of many fruits, vegetables, flowers, shrubs and ornamentals.

KELTHANE gives you fast, positive kill of most troublesome mite species, including "resistant" strains. Fewer applications are required, because of its long residual activity. What's more, KELTHANE is harmless to operators, beneficial insects, animals and adjacent crops when used as directed. For minimum mite damage and maximum yields... look to KELTHANE, today's really effective miticide in emulsifiable concentrate, wettable powder, or dust formulations.

ROHM & HAAS
PHILADELPHIA, PA.

KELTHANE is a trademark, Reg. U.S. Pat. Off. and in principal foreign countries.

Checkmate for mites...

KELTHANE

FARM CHEMICALS HANDBOOK

SINCE 1912 *Farm Chemicals Handbook* has been the standard reference of the plant food and pesticide industries. Now AMERICAN FRUIT GROWER makes it possible for you to have this invaluable reference at a low price.

A glance at the Table of Contents listed below will give you an idea of the scope of material included in the *Handbook's* 384 pages, which are enclosed in a buckram cover.

TABLE OF CONTENTS

Dictionary of Plant Foods
Dictionary of Pesticides
Plant Food Law Summaries by States
Pesticide Law Summaries by States
Geographic Listings of Farm Chemical Manufacturers

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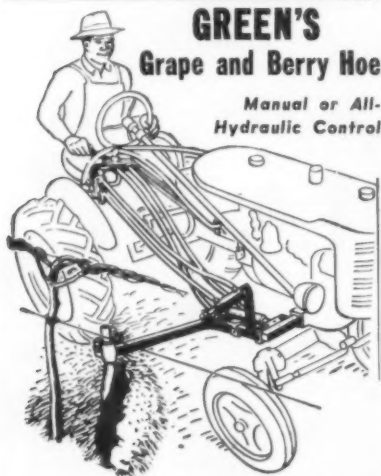
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INDUSTRY

(Continued from page 14)

farm background. They are agricultural specialists—able to work hand in hand with growers and not just peddlers of chemicals. Apart from their own experience they have available to them the knowledge which is constantly being developed by the research laboratories and the programs which they conduct in co-operation with federal, state, and county specialists.

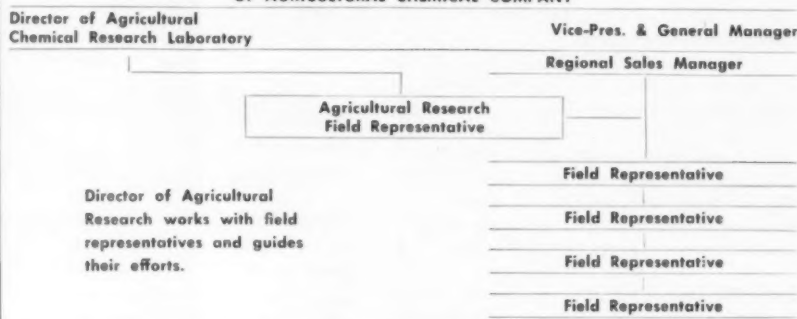
Let me emphasize that I have been referring primarily to the marketing of what we might call standard products. For today there are hundreds of "new" standard products being

In many companies the technical service concept now dominates all marketing. It certainly does so to a far greater degree than was the case even a decade ago. And, with the proliferation of research, there is every reason to believe that this trend will continue.

It is the responsibility of our industry to help lead the grower out of his infestation problems; to render practical assistance; to complement with our experience his broad knowledge of growing; to work today to help make his next season more profitable.

But let me not imply that we regard this as a purely altruistic effort. It isn't. Rather it is simply a sound

CHART SHOWS TYPICAL ORGANIZATIONAL STRUCTURE OF AGRICULTURAL CHEMICAL COMPANY



marketed year by year. Each has its unique characteristics; each has its optimum application technique and schedule.

It is well nigh impossible for the grower to keep abreast of all the how's, why's, and what-will-it-do's of the myriad of newer pesticides and formulations. That responsibility, the responsibility to be intimately familiar with all the advantages and any shortcomings of all these pesticides, now falls upon the representative of the agricultural chemicals producer. If he fails to carry that responsibility the grower suffers, he suffers, and so, inevitably, does his company.

Each of our field representatives is kept constantly advised as to all promising new agricultural chemicals developed by the research department and being field tested. In this way he knows a great deal about the new products by the time he is ready to sell them.

A similar organizational structure, which includes a number of specialists—chemists, botanists, plant pathologists, and entomologists—is a part of every modern company's new product development group. It is their job, of course, to appraise the worth of all new compounds; it is their job, through seasons of field experiments, to develop the practical information which will be utilizable a few years hence.

business philosophy. For whoever renders a service which profits a grower will in turn profit.

Through such a mutuality of interest both the grower and the agricultural chemicals industry benefit. That is an objective worthy of cultivation and of attainment. **THE END.**

Calendar of Coming Meetings & Exhibits

Feb. 6-8—State Horticultural Association of Pennsylvania annual meeting, Yorktowne Hotel, York.—J. U. Ruef, Acting Sec'y, Pennsylvania State University, University Park.

Feb. 13-16—Conference on Factors Affecting Fruit Condition, Rutgers University, New Brunswick, N.J.—Norman F. Childers, Dept. of Horticulture, Rutgers University, New Brunswick, N.J.

Feb. 16-17—Carolina-Virginia Fruit School, YMCA, Mt. Airy, N. C.—Melvin H. Kolbe, Ext. Hort., North Carolina State College, Raleigh.

Feb. 19-22—National Peach Council annual meeting, Marion Hotel, Little Rock, Ark.—Bob Rogers, Sec'y-Treas., 302 W. Walnut, Carbondale, Ill.

Feb. 23-24—West Virginia State Horticultural Society annual convention, Martinsburg.—Carroll R. Miller, Sec'y, Box 892, Martinsburg.

Mar. 3—Pear Day, University of California, Davis.

Mar. 4—Peach Day, University of California, Davis.

Mar. 8—Dwarf Fruit Tree Association annual meeting, Hill Top Orchards, Hartford, Mich.—R. F. Carlson, Sec'y-Treas., Michigan State University, East Lansing.

Mar. 17—Midwest Peach Pruning Conference, Frank Street Orchard (Cardinal Farms) Henderson, Ky.

Mar. 19-25—Caribbean Region, American Society for Horticultural Science annual meeting, Miami, Fla.—E. H. Casseres, Sec'y-Treas., London 40, Mexico 6, D.F.

AMERICAN FRUIT GROWER

INSECT CONTROL

(Continued from page 9)

sects and mites in 1960. This does not mean that it was unnecessary to carry out a highly effective spray program. It was definitely necessary. This was shown by the degree of insect damage that occurred in scattered orchards in which adequate control measures were not used. There were enough such examples to serve as a warning to fruit growers that they cannot relax their vigilance if they are to grow the high quality fruit demanded by consumers.

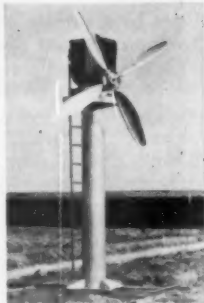
The high degree of insect control obtained by most fruit growers in recent years attests to the effectiveness of the recommended insecticides and miticides when they are used as directed. However, we cannot afford to stand still. Insects are extremely versatile in adapting themselves to changing conditions. Insecticides that are highly effective today may be inadequate tomorrow or later. The continuation of research on insects that are now under good control is necessary insurance for the future. A few examples will serve to illustrate this point.

The use of DDT reduced the codling moth from a limiting factor in apple production to a minor problem. It enabled growers to reduce the amount of the crop damaged by that insect annually from 15 to 20% or more to 1 or 2% or less.

A great many growers who will use DDT include it in only a part of their program or in combination with other materials such as Guthion, Sevin, parathion, or malathion. Thanks to continuing research on codling moth control, the value of the materials now used with or in place of DDT for controlling DDT-resistant strains of that insect was known when it became necessary to modify the apple spray program to maintain it under good control.

About 10 or 12 years ago parathion appeared to be the answer to the mite problem. Very small amounts gave a long-lasting control. Unfortunately, this situation prevailed for only a short time. Parathion-resistant strains of mites soon appeared in a few orchards in a limited area, then occurred gradually in an ever-increasing number of orchards in an ever-widening area until now parathion cannot generally be depended upon for mite control.

Then other organic phosphorus compounds appeared to be good miticides and performed well for a time. Fortunately, continuing research by industry and government agencies resulted in the discovery of



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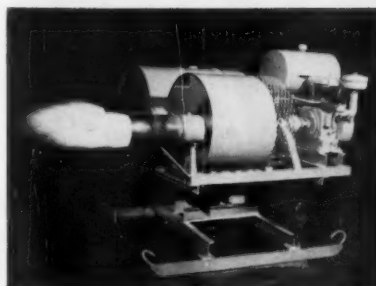
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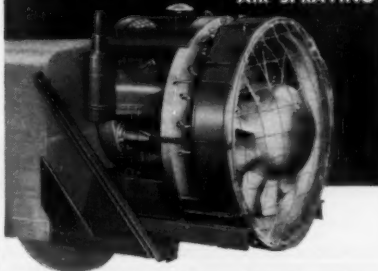
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the miticidal qualities of a variety of non-phosphorus compounds that are now largely depended upon for control.

Growers are familiar with ovex, Genite, chlorbenside, Chlorobenzilate, Aramite, Kelthane, and Tedion, materials now widely depended upon to control mites on fruit crops. Unfortunately, there are now present in one or more areas strains of mites resistant to these materials and the search continues for materials to combat them.

When the red-banded leaf roller became a problem pest in eastern and midwestern orchards in the late 1940's, TDE was found to be extremely effective in its control and remained so until a few years ago. Then, with little warning, a few growers found that TDE was no longer effective in their orchards and within two or three years many additional growers throughout the infested area had the same experience.

Here again the results of continuing research on that insect paid off. Alternate materials were available that could be used with TDE or in lieu of it to maintain good control.

The point of the foregoing discussion and examples is that we cannot afford to stand still or forget a problem even when it appears to have been solved. We must continue to move ahead or we may once again find ourselves in the unfortunate situation of the 1930's and early 1940's when important fruit-producing areas went out of existence because of the difficulty of insect control.

The effect of continuing research is evident by the number of new chemicals that received label approval for orchard use as insecticides and miticides during 1960. Materials in this category include Tedion for controlling mites while fruit is present; Thiodan for control of peach tree borer in the South and Southeast and, on apples and peaches, for aphids prior to petal fall; ethion for use against a variety of insects and mites; phosphamidon for early season use against codling moth, leafhoppers, and aphids in the East and Midwest; and Dibrom for use on a few tree fruits.

There were also approved a number of new uses for some of the older materials and reduced waiting periods for still others to permit their application closer to harvest.

There was progress, too, during 1960 in the development of miticides not yet ready for recommendation. Some of these will undoubtedly find a place in future spray programs. Because of the need, it is not surprising that the most significant re-

sults were with potential miticides.

Most promising are several analogs of Aramite, particularly one known by the Code No. OW-9, which appears to be as effective as Aramite. Bayer Compounds 28589 and 30686, especially the latter, also gave good control of several of the common species of mites in a number of widely scattered experiments.

Dimethoate, although it is an organic phosphorus compound, also appears to be a promising miticide. It is possible, however, that the occurrence of phosphorus-resistant strains may limit its value for mite control.

Polybutenes, highly viscous oil-related compounds that appear to control mites mechanically, also



European red mite adult female, greatly enlarged.

show considerable promise for use in the early part of the season. Their deposits remain sticky for an extended period and are objectionable on harvested fruit.

Continued study of Guthion and Sevin confirmed their outstanding effectiveness against codling moth and a variety of other fruit pests. Guthion is somewhat superior to Sevin for general use because of a little longer residual value, its ability to hold mites in check, its value against a somewhat wider range of insects, and its lack of any ill effect on fruit set.

The use of Sevin is limited to the later cover sprays on apples and pears because of its thinning effect on apples and a possible detrimental effect on pears when used too soon after petal fall and by the tendency of mite populations to increase to an injurious level following its use. Its thinning effect on apples seems to be stronger as one goes westward.

As a precaution it seems best for the present not to use Sevin on apples until at least three weeks after petal fall in the East and Midwest and four weeks after petal fall in the West. Present indications

are that it should not be used on pears close to petal fall but that it can be used on peaches as soon as desired.

The apparent inability of insects and mites to develop resistance to oil sprays has focused attention on their possible more extensive use in fruit spray programs. The chief handicap to their use is their incompatibility with many of the newer organic insecticides and fungicides.

Oil-organic phosphorus combinations have been widely tested in pre-bloom applications for their value in aiding in the control of scale insects, mites, and aphids. Results have been conflicting. In some instances the combinations have given worthwhile improvement in control and in others there has been no advantage in using them. Undoubtedly the degree of infestation has been a factor.

The phosphorus compounds most commonly used with oil have been parathion, malathion, Trithion, and ethion. Not all formulations of these materials mix equally well with oil and not all combinations mix satisfactorily in all types of water, especially when a fungicide is included. Growers planning to use such combinations should observe closely a trial tank of spray before going ahead and make sure it is suitable for application. An unsatisfactory mixture could cause serious tree damage.

Oil sprays are also being widely tested for possible use in summer spray applications. Here again their incompatibility with many of the newer organic insecticides imposes serious limitations and the necessity for a great deal of research to determine safe, effective combinations.

There is an increasing interest in new approaches to insect control, approaches that may still depend on chemicals but on chemicals that act on insects in different ways than those that have been and are used. Increasing emphasis is being placed on research with systemic insecticides, with antibiotics, with chemosterilants, and with other materials that offer promise of interfering with insect development, with insect attractants, and with insect diseases.

Preliminary studies have given promising leads. It is hoped that research in one or more of these areas will prove fruitful and not only reduce our dependence on conventional insecticides but provide a means for combatting insecticide-resistant strains. THE END.

Construction details for Cornell University plastic panel greenhouse, names of suppliers of materials, films, and adhesives for plastics, and reprints of current articles on plastic greenhouses are available from AMERICAN FRUIT GROWER, Willoughby, Ohio, for 50 cents a set.

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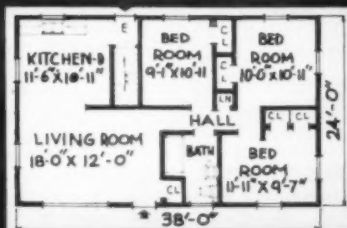
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The Best

Last summer in Michigan peach growers were having wonderful success with a new corrugated peach box. The box is moisture resistant and has proven itself under the most extreme conditions for the past two years. The boxes are most attractively illustrated and colorfully printed. The picture shows how they were used in the



AMERICAN FRUIT GROWER

Benton Harbor market and you can see that these peaches just came from the hydrocooler. This year you will want to upgrade your packaging to get higher prices. Here's one way to do it. Why not write Robert D. Ackerman, West Virginia Pulp and Paper, Hinde and Dauch Division, 407 Decatur St., Sandusky, Ohio.

New Rotary Tiller

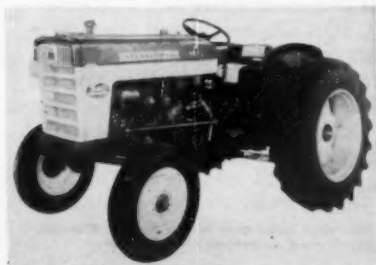
Many growers are acquainted with the splendid job a tractor-drawn rotary tiller can do on the orchard floor. We have used a rotary tiller in our experimental orchard and have found it quickly pays for itself. A new machine has just been made available to fruit growers that includes many important improvements which we growers need. The machine can be



adjusted for coarse, fine, or medium till by the tractor operator, and is built in several sizes to fit your particular requirements. I do hope you will write to Eagle Manufacturing Company, 2744 N. 124th St., Milwaukee, Wis., for more details.

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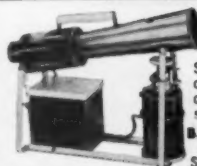
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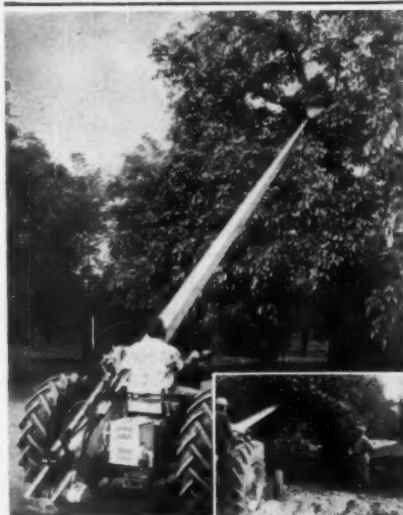
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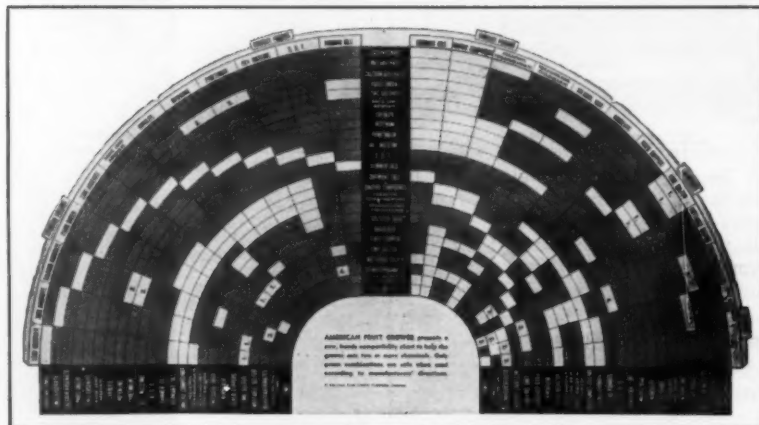
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CHICK ORCHARDS

(Continued from page 11)

and will use Tedion® miticide or some other more specific pesticide when a specific pest becomes troublesome.

According to the Chicks, they have always worked closely with Niagara in mapping out the pesticide program and tackling new pest

THE CHICKS USE THIS FLEET OF EQUIPMENT TO OPERATE THEIR 350 ACRES OF ORCHARD

- 1 500-gal. Bean Speed Sprayer
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- 2 Ford tractors
- 2 1960 long wheel base Ford 600 trucks (2 speed rear axles)
- 3 Ford short wheel base F. 500 1½ ton trucks
- 1 Ford pickup
- 1 Chevrolet ¾ ton pickup

problems as they arise. The firm relies heavily on the Niagara technical service fieldman to come up with the right "prescriptions."

Good fertilization is one of the Chicks secrets to lush, healthy orchards. Ammonium nitrate is applied around the trees while a complete fertilizer (8-16-16) is applied between rows.

At one time a boron deficiency was detected and a special application of boron was sprayed on during the season to relieve what was fast becoming a serious problem. Ordinarily boron is applied to the soil once every three years, but in this particular year weather conditions had caused it to be washed out. Magnesium deficiency has also been detected and corrected by the Chicks.

Ben Chick points out that proper thinning is important to the final harvest. Most thinning at the Chicks is done chemically, using naphthalene-acetic acid. Occasionally, they find it expedient to thin by hand.

The Chicks currently have one large cold storage unit of 55,000 capacity plus three small ones and one central packing house. Carrier and York refrigeration equipment is used. Plans are underway for construction of another large cold stor-

age unit in the spring of 1961, plus enlarged packaging facilities. At present the Chicks can store only around 85,000 bushels, but new construction should increase storage capacity to about 125,000.

Between 800 to 1000 bushels of apples are packed daily at Chick Orchards on the average. A packing line of 10 to 12 is generally in operation during peak harvest.

The standard package employed by the Chicks is a white corrugated-board Chic-A-Dee brand cell-pack carton in count sizes of 80, 96, 120, 140, 160, and 200. These cartons are wire stitched at the bottom while top closures are stapled. Red and Golden Delicious packed in these cartons are placed in Keyes molded fiber trays rather than the standard paper fillers used for other varieties.

In addition to the cell cartons, polyethylene bags are used by the Chicks to pack utility grades. Occasionally 2¼-inch Macs and Delicious are also packed in these bags.

In recent years the Chicks have built up a sizable Christmas-pack trade. These special gift packages contain extra fancy grades of Macs, Golden and Red Delicious, and Cortlands. White paperboard cartons with the Chic-A-Dee brand printed in color are used. Sizes include the 12, 24, and 48 count packs.

Chick Orchards got its start when George Chick purchased the initial orchard. Ben Chick bought an orchard of his own shortly after, and the two brothers decided to go into a joint growing venture as a sideline. Today they have 18 orchards in all. Ben taught high school for 11 years in Monmouth, Maine, while simultaneously taking an active hand in the business. George, in addition to his interest in Chick Orchards, has been employed in the services of the state of Maine over the years. He currently is chief of the Division of Markets in the State Department of Agriculture.

George and Ben are Bates College graduates while brother Arthur is a University of Maine graduate. Ben's son Norman and George's son Roger are also University of Maine graduates, both majoring in horticulture.

Chick Orchards now employs some 10 full-time people plus a staff of pickers and packers which in the height of the season may run as high as 140 people. The large picking crew is essential for harvesting McIntosh when they are at optimum condition of maturity. THE END.

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DISEASE PROBLEMS

(Continued from page 12)

fire blight disease; and on susceptible varieties two or three sprays of streptomycin before the fruits form for blossom blight control. Phaltan, when it is approved for use, will undoubtedly be employed in some orchards for control of Botryosphaeria fruit rot.

It is essential, in Illinois, to include a dithiocarbamate fungicide such as either zineb, Niacide M, or thiram in the schedule of all apple varieties because of the high incidence of cedar rust on Jonathan, Rome Beauty, York, and Willow Twig, and quince rust on Red Delicious, Golden Delicious, and the Winesap varieties.

The use of 1/2-1-100 Bordeaux mixture as a special spray on blight susceptible varieties at three- to four-day intervals has aided in the control of the twig-blight phase of fire blight. It is started at the first cover and continued through the month of July. Some growers are using as many as 14 such sprays. Because of the repeated close-interval applications fruit russetting does not develop.

While this program is in use other fungicides are not needed. The organic insecticides and acaricides should be applied separately. If they were mixed in the spray tank with Bordeaux mixture they would be incompatible. When applied separately no incompatibility problems have arisen.

Another special spray for only blight-susceptible varieties is copper sulfate (bluestone), 4 pounds to 100 gallons in the dormant period. Some growers in the Midwest are using two such sprays two weeks apart during the early spring before the leaf buds break. This treatment has effectively reduced fire blight infection. It should be used as a special treatment and not in combination with any other material which might be applied for insect and mite control.

Peach Diseases—The dormant spray on peaches should include a fungicide for the control of leaf curl. Any of the inorganic or organic commercial fungicides can be used effectively. The prebloom and bloom applications contain dichlorone for brown rot blossom blight control.

Following the "shuck-off" period, sulfur alone or in combination with captan is essential. Sulfur should be continued for at least four applications and then replaced by full-strength captan.

There are not many variations from this program. Nothing is better than dichlorone for blossom-blight control; sulfur is the most effective material we have for peach scab; and none of the fungicides have surpassed

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captain in suppressing the fruit rot phase of brown rot.

A few growers are of the opinion that copper sulfate, 4 pounds to 100 gallons, applied during the fall period will effectively reduce bacterial spot spring-canker development. A very few growers still use special foliar sprays of zinc-Bordeaux (zinc sulfate 4 pounds, hydrated lime 6 pounds, to 100 gallons of water) for bacterial spot control.

Strawberry Diseases—Thiram and captan are the most widely used fungicides on strawberries. They are mostly combined to control the foliar diseases and fruit rot. Captan appears to have a slight advantage for the foliar diseases and thiram is slightly superior for the control of fruit rot.

Dodine (Cyprex), while not approved for use at this time on strawberries, has a place in the strawberry schedule for leaf scorch control. It is superior to both captan and thiram against this disease. It is not effective in controlling the fruit rot, however.

Grape Diseases—Ferbam and captan are the choice grape fungicides at this time. Ferbam is recommended for the early season sprays followed by captan after the fruit forms.

Under Illinois conditions these two materials do an excellent job of controlling both black rot and downy mildew. Phaltan, when approved for use on grapes, will probably replace both materials, since it has been superior to either ferbam or captan in Illinois tests. Where powdery mildew is a problem, however, either one of the insoluble copper fungicides or Bordeaux mixture should be used.

The commercial grape industry in Illinois is seriously threatened by the promiscuous use for weed control of volatile esters of 2,4-D. The current season's crop may be drastically reduced; the growth of the vines may be affected sufficiently to reduce production in succeeding years; and, after damage occurs, some vineyards are abandoned, resulting in severe late season epiphytotic of black rot and downy mildew which increases the problem of controlling these the following year.

It is hoped that legislative controls can be obtained to restrict the use of 2,4-D in grape areas. **THE END.**

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FOR SALE: HEAVY DUTY ALL STEEL reverse flow (2 way) belts for large or small packing houses. 10' to 60' lengths—may be lengthened at any time. Competitively priced. Write **MIDWESTERN MACHINE CO.**, Belding, Mich.

NIAGARA LIQUI SELF POWERED ONE man duster & 200 gal. Hardie sprayer with 30" blo spray self powered all in good operating condition for less than you would expect to pay. **SCOTT OR EBRITES ORCHARD**, Yorktown, Ind. Phones Skyline 9-5151 & Skyline 9-7491.

10-TON TRUCK HOIST \$199.99—\$50 DOWN, \$50 monthly. Can use Agents. **DUNBAR**, Minneapolis 8, Minnesota.

BUILDINGS, PRE-FAB 24 x 48 \$1156. 30 x 60 \$1270. 40 x 108 \$3978. I.o.b. factory. Write for picture and price on size you need. **WAYNE WYANT**, New Bethlehem, Pa.

WATER SUPPLIES, INC. DEALERS FOR Myers power sprayers. Largest stock of new and used power spraying equipment in Ohio. Let us know your needs. **WATER SUPPLIES, INC.**, P. O. Box 547, A-hland, Ohio—Phone 21565.

USED SPRAYERS—MYERS ORCHARD AIR sprayer, 300 gal. 25GPM with bomber tires. Iron Age, 14GPM, 300 gal. tank. PTO.—Hardie 100 gal. tank, engine driven, 8GPM pump—Iron Age 8GPM pump, engine driven, 150 gal. tank.—Hardie 500 gal. tank, PTO, 60GPM pump, hydraulic 42 ft. boom. All equipment in good condition and priced right. **DEISCH SUPPLY CO.**, Napanee, Indiana. Phone 654.

JOHN BEAN SPRAYERS AND BLOWERS. 1—35 M. T. engine drive 500 gal. refiller, nearly new. 1—35 PTO 600 gal. refiller, rebuilt, new tank. 1—30 PTO 500 gal. refiller, rebuilt, new tank. 1—20 PTO 300 gal. refiller, 8RC blower, nearly new. 1—102P, potato grader, electric, rotary peck & 100 lb. bagger. **J. JACOBSEN & SON**, Girard, Penna. SP 4-4502.

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GRAY HAIR LIQUID IMPARTS COLOR TO gray or faded hair \$2.50. Rotor clips unwanted hair in nose and ears \$1.15. Postpaid. **FENDRICKS**, 114 North 6th Street, Allentown, Penna.

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WANTED: PACKING HOUSE MANAGER for Western Michigan area. Must be able to manage large operation, both packing and cold storage operation. Plant packs 300,000 bushel and is capable of 500,000 bushel of peaches and apples. Must know grading and how to handle lugs. Salary commensurate with ability. Write **AMERICAN FRUIT GROWER**, Box 217, Willoughby, Ohio. Give résumé of experience and background.

MISCELLANEOUS

BANANA PLANT, GROWS ANYWHERE—indoors, outdoors. \$1.50. Postpaid. **SOPHIA SULEN**, Ladylake, Fla.

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SUBSCRIBE TO GOVERNMENT SURPLUS weekly, lists all sales. Buy Jeeps, trucks, boats, tents, tires, etc., direct from government. Next 10 issues \$2.00. **GOVERNMENT SURPLUS**, Paxton, Illinois.

WINE-BEER-ALE RECIPES. FOR HOME use. Send \$1.00 to **HOWE**, Box 9031, S. Lansing 9, Michigan.

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HOME TYPING: \$65 WEEK POSSIBLE. Details, \$1. **TREASURY**, 709 Webster, New Rochelle AF-2, N. Y.

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SCASH MAKING ARTIFICIAL FLOWERS. Discount catalog 10¢. **FLOCRRAFT**, Farrell 9, Pennsylvania.

ORCHARDS FOR SALE OR LEASE

FOR SALE: 18 ACRES, WILLAMETTE VALLEY 130 sweet cherry, 220 apple, pear and miscellaneous fruit trees. Retail market. \$9,000. Terms, 5-bedroom residence, optional. **GOIN'S FARM**, Jefferson, Oregon.

FOR SALE 80 ACRE APPLE ORCHARD. Good buildings, good varieties. **CORY ORCHARDS**, Dana, Indiana.

WITHIN 40 MILES OF DETROIT, 60 ACRE productive orchard. Apples, peaches and plums. Pear orchard and raspberries about ready to bear. Well stocked pond, modern 3-bedroom house, outbuildings. **AMERICAN FRUIT GROWER**, Box 216, Willoughby, Ohio.

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APPLES—MACINTOSH, CORTLAND, DELICIOUS, 2100 trees, cold storage barns, 8 room dwelling, all equipment. \$13,000. **SECURITY REAL ESTATE CO.**, Camden, Maine.

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SEPTIC TANKS, CESSPOOLS, OUTDOOR toilets. Keep clean and odorless with Nuthel Septic Tank Reactivator. Bacterial concentrate breaks up solids and grease—prevents overflow, locates odors. Regular use saves costly pumping or digging. Simply mix dry powder in water—flush down toilet. Non-poisonous, non-caustic. Six months supply only \$2.95, postpaid (money-back guarantee of satisfaction), or rush postcard for free details. **NORTHEL**, FV-2, Box 1103, Minneapolis 40, Minnesota.

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MIDDLE AGE MAN WANTS CONNECTIONS in orchard with base plus percentage. Have degree in horticulture and several years orchard experience. Write **AMERICAN FRUIT GROWER**, Box 218, Willoughby, Ohio.

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SPARROW TROUBLE? TRAP THE PESTS. Free information. **JOHNSON'S**, Waverly 12, Kentucky.

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STRAWBERRY TRANSPLANTER FOR USE with Cub tractor. **FINLEY BERRY FARM**, Route 3, Uniontown, Ohio.

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HEAVY TREAD

Good for mud & rough going. Perfect condition. Used.

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750x20—	8 ply and tube	17.50
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Excellent Condition Grade A

650 x 14	6 Ply	\$ 8.50
700 x 16	6 Ply	10.00
750 x 16	8 Ply	12.00
700 x 17	6 Ply	12.00
750 x 18	8 Ply	15.00
600 x 20	6 Ply	12.00
650 x 20	8 Ply	12.00
750 x 20	10 Ply	17.50
825 x 20	10 Ply	20.00
900 x 20	10 Ply	20.00
1000 x 20	12 Ply	25.00

MANURE SPREADER

Used Traction Treads

750x20	\$15.95;	900x20	\$20.00
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1600 x 16	14 Ply	New Nylon	\$77.50
1700 x 16	12 Ply	used excel.	35.00
1300 x 24	8 Ply	used excel.	35.00

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FRESH STOCK. Not surplus. Good for Mud & Heavy Loadings.

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600 x 16	6 Ply	\$22.50
700 x 16	6 Ply	28.00
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750x15	6 ply 1st	24.50
750x17	8 ply 1st	40.00
750x20	8 ply 1st	45.00

New Regular Tread Specials

825x20	10 ply 1st	\$59.50
900x20	10 ply 1st	69.75
1000x20	12 ply 1st	88.00
750x15	6 ply 1st	24.50
750x17	8 ply 1st	40.00
750x20	8 ply 1st	45.00

USED TRUCK TUBES

650x20	750x16	\$2.50
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**DEALERS
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Labor and Agriculture

SOME of your holiday reading may have included the second volume of Bernard Baruch's autobiography, *The Public Years*. And if it did, you may have had your eyes opened to what an important American businessman-statesman thinks about two problems that are uppermost in the minds of fruit growers.

Listen to some remarks about labor:

"I was impressed by the fact that labor seemed to care no more about the public interest than did industry."

"By abusing its powers, labor injures not only itself but the whole country . . ."

"If wage and other demands are not accompanied by increased productivity, inevitably prices will be driven out-of-reach, and foreign competition encouraged, to the detriment of the entire economy. American workers will wind up as the highest paid unemployed workers in the world."

And these remarks about the farm situation:

The farm situation is a "glowing example of the evils of unbridled competition, whose consequences are as bad, if not worse, than those of monopoly."

"The great corporations of America, although eloquent in praise of competition, have nevertheless been built through co-operation, consolidation, and integration."

"I had learned that the old 'let things alone' philosophy was no longer adequate to the needs of a changed America."

"Often, as I watch my neighbors in South Carolina putting in crops, I am struck by the thought that if they would only plant as much as they know they can sell, and if they could only organize their economic strength as other groups have done . . ."

Really some good philosophy with which to start the thinking in the New Year.

Salute to Industry

ONE of the great contributions to the fruit industry comes from the manufacturers, distributors, and sales organizations through the excellent and reliable service that they supply along with their products.

Perhaps at times we do not fully appreciate what has happened. But there was a time when there was too much of "let the buyer beware." Labelling was not always the best. Directions were indifferent. And there was more emphasis placed upon sales than upon service.

But this is not the situation today with reliable concerns. Instead, directions are explicit and should be followed. Service is good. The penalties for misleading claims and for over-selling are severe. The discrediting that would follow would bankrupt a company, and everyone knows it.

The caliber of field men now representing reliable manufacturers and dealers is excellent. As fruit growing becomes ever more specialized, these men have stepped up to give some of the service that county

agents and extension specialists rendered a decade or two ago. And they are likely to play a still greater part in the years ahead.

Fruit Growing is Such Fun!



Successful orchard practice starts in the living room—dreaming.

Fruit Talk

"Come-and-get-it" is the way English growers advertise successfully the "pick-it-yourself" plan.

Reports of laboratory tests from Scotland are to the effect that when a young pea plant is grafted onto a strawberry plant (not really grafted but rather held in place), the strawberry plant makes greater growth, suggesting that there are gibberellin-like substances in most plants, another step in the ever-expanding field of chemical control of growth and fruiting.

Says H. P. Gaston of Michigan, "Harvesting machinery of the future will be designed more with the operator in mind"—too much adaptation of old machinery, like running tractors backward, which is very hard on the neck!

"The only competition which an individual faces is competition from himself," says Walter Myers, vice president of Minnesota Mining and Manufacturing Company—competition for our own wasted time, misdirected efforts, and lack of interest. To which H.B.T. would add, "And the greatest delusion of the human race is to blame someone else for our own shortcomings!"

Scald of Anjou pears has been effectively controlled, say Hansen and Mellenius of Oregon, by CA storage in which the oxygen content of the storage atmosphere is reduced to 1 or 2½%, with temperatures of 30° F.

Gertrude Ochs of the University of Freiberg, West Germany, has devised a method of diagnosing the leafroll virus disease of grapes by colorimetric tests of leaves of suspected grape vines.

One of the interesting trends among fruit growers is the increased interest and curiosity about fundamental research—tracer techniques with C¹⁴O₂ in fruit storage, chemical laboratory tests of miticides, laboratory studies of photosynthesis and of hardiness, spectrographic determination, tensiometers, electronic apparatus, and so on and on—a good sign.

Reading about the well-attended black currant conference in England makes one wonder why with all our scientific knowledge we are not able to control the devastating blister-rust on white pine (for which the black currant is an alternate host) and so permit the black currant to be grown and added to the list of healthful and attractive fruits for American consumers.

To facilitate mechanical harvest of prunes, says A. D. Rizzi of California, young trees should be trained with the lowest limb no less than 24 inches from the ground, and there should be a space on the trunk of at least 24 inches above the first primary scaffolds for easy access of the shaker head or clamp.

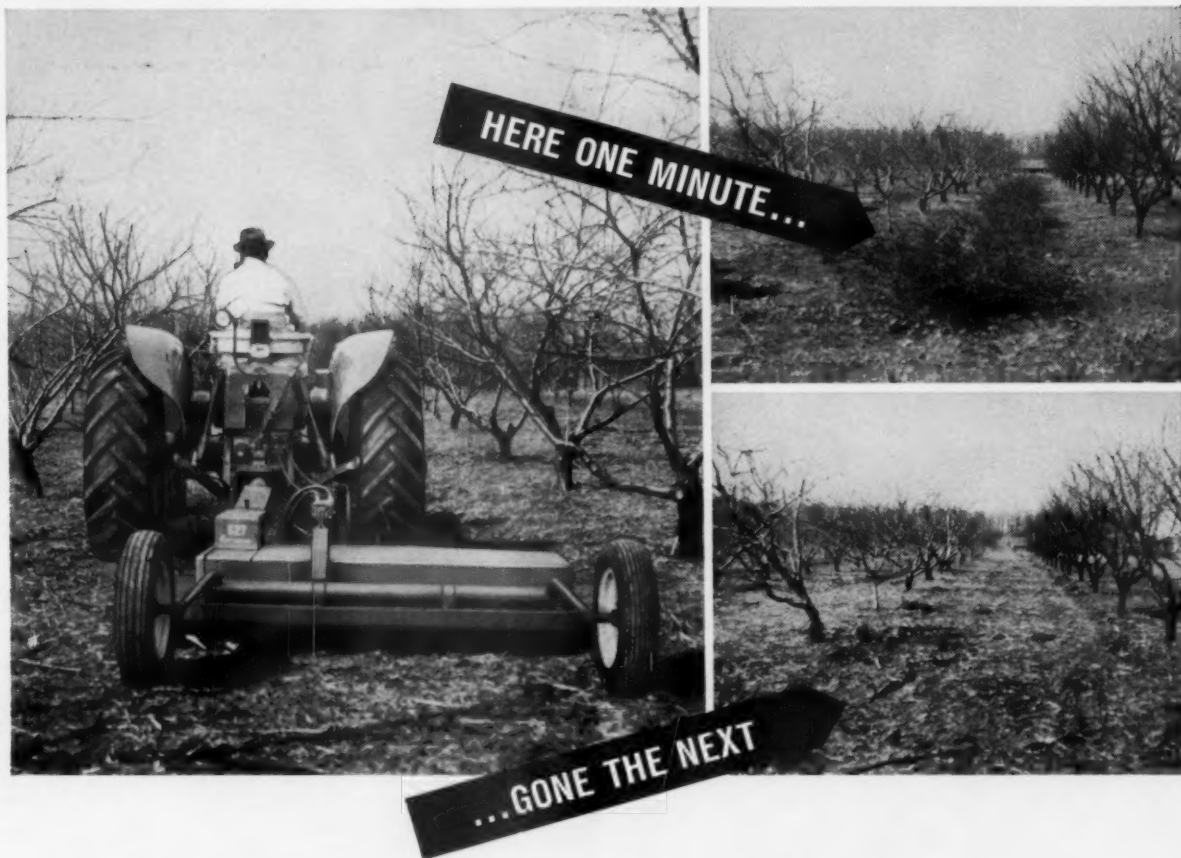
—H. B. T.

Coming Next Month

- How Harold Fox Raised the Temperature in his Cherry Orchard
- Fruit Areas of America—Florida
- An Ohioan Asks: "Should I Start a Fruit Farm?"
- A Look at What Fruit Breeders Have Done
- Register of New Fruit and Nut Varieties



Another partner for the New Generation of Power:



Get close to your work...
use a John Deere 527 Offset GYRAMOR

Presto! Watch orchard trimmings vanish before your eyes. Magic? No, just another example of the money-saving performance of a John Deere 527 Offset Gyramor—a truly modern rotary cutter designed for orchard work.

Because the 7-1/2-foot 527 is offset 75 inches to the right of the tractor centerline, you can work under low-hanging branches . . . cut orchard floors up close to tree trunks . . . eliminate the back-breaking and time-consuming task of loading and

hauling away orchard trimmings.

You'll appreciate these features: A fully shielded drive with shear pin, or optional slip-clutch protection; a heavy-duty gearbox with alloy-steel gears bathed in oil; a rotor shaft with heavy-duty, anti-friction bearings in shock-resistant malleable iron housing; and blades of alloy steel, forged and heat-treated for maximum strength and durability.

Ask your John Deere dealer about the John Deere Offset 527 Gyramor.

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NOTHING BEATS CAPTAN

Captan is so effective at all stages of fruit growth, you don't have to switch from one basic fungicide to another as the season progresses. This is why many growers call Captan the *all-season* fungicide.

Stauffer Captan 50-W reduces apple scab to a minor problem when used straight through from pre-bloom to harvest. Scab control becomes easier and easier in succeeding years because fewer spores are left to overwinter. Control can then be accomplished with reduced dosage rates—as low as one pound of Captan per hundred gallons of water.

Captan controls scab three ways: (1) Applied before an infection period, it protects fruit and foliage from infection; (2) applied shortly after infection occurs, it kills the scab fungus; and (3) applied when scab spots first appear it inactivates the spots and prevents further infection.

Captan controls major summer diseases, and can be used right up to day of harvest to help protect fruit against storage rots and storage scab. It helps fruit develop fine color and finish. In

pre-bloom sprays, it teams up with sulfur to control powdery mildew and scab.

Stauffer Captan is also available as a dust for ground or aerial application where early season weather conditions make it difficult to get into an orchard with spray equipment.

No other fungicide beats Captan for control of scab and summer diseases on apples . . . for rots, leaf spot, blossom blight, scab and other diseases on peaches, cherries, grapes, pears, plums and berries. Write for a new pamphlet. Stauffer Chemical Company, 380 Madison Avenue, New York 17, New York.



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